

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Amendment of Part 2 of the Commission's)
Rules to Allocate Spectrum Below 3 GHz for) ET Docket No. 00-258
Mobile and Fixed Services to Support the)
Introduction of New Advanced Wireless)
Services, including Third Generation Wireless)
Systems)

**COMMENTS IN RESPONSE TO
THIRD NOTICE OF PROPOSED RULEMAKING**

THE WIRELESS COMMUNICATIONS
ASSOCIATION INTERNATIONAL, INC.

Andrew Kreig
President

1140 Connecticut Ave., N.W.
Suite 810
Washington, D.C. 20036-4001
(202) 452-7823

April 14, 2003

TABLE OF CONTENTS

EXECUTIVE SUMMARY	ii
I. INTRODUCTION	1
II. DISCUSSION	12
A. The Most Efficient and Effective Use Of The Bands Under Consideration Requires The Reallocation of 1910-1916 MHz and 1990-1996 MHz For Relocated MDS	12
1. The 1910-1930 MHz and 1990-2000 MHz Bands	16
2. The 2020-2025 MHz Band	22
3. The 2155-2180 MHz Band	23
B. The Commission’s Suggestion That MDS Licensees Might Be Left With “Substantially Less” Spectrum Violates the Commission’s Policy That Relocated Licensees Be Made Whole.....	28
1. The Commission’s Relocation of MDS Licensees Must Be Guided By Fundamental Considerations of Fairness	29
2. Awarding MDS Licensees “Substantially Less” Than 12 MHz of Viable Replacement Spectrum Would Undermine The Integrity of The Auction Process And Cast A Pall Over Future Auctions For Years To Come	36
3. The Commission’s Proposed Reclamation of a “Substantial” Portion of the 2150-2162 MHz Band Would Defeat the Legitimate Investment-Backed Expectations of Incumbent MDS Licensees	42
C. The Commission Should Employ the Band-Clearing Policies Proposed In the MDS Industry Compromise To Govern The Relocation of Incumbents in the 1910-1916 MHz And 1990-1996 MHz Bands.....	45
D. The Commission Can Resolve the Interference That Nextel Causes To Public Safety Users At 800 MHz Without Granting Nextel A Nationwide License For The 1910-1915/1990-1995 MHz Band Pair	47
III. CONCLUSION.....	48
Attachment A- A Compromise Solution for Relocating MDS From 2150-2162 MHz	
Attachment B- Marconi 1910-1920 MHz Report	
Attachment C- LCC Report	
Attachment D- Marconi 2155-2180 MHz Report	

EXECUTIVE SUMMARY

For the third time in less than three years, the Commission has solicited public comment on the relocation of Multipoint Distribution Service (“MDS”) licensees from the 2150-2162 MHz band (MDS channels 1 and 2/2A) in order to free the 2110-2155 MHz band for Advanced Wireless Services (“AWS”). In the past, WCA (along with the holders of the vast majority of the MDS licenses in the 2150-2162 MHz band) has demonstrated that the only viable alternative is to relocate MDS to the 1910-1916/1990-1996 MHz band under rules that allow flexible use and assure protection of the broadband Personal Communications Service (the “MDS Industry Compromise”). While the *Third Notice of Proposed Rulemaking* (“*Third NPRM*”) advances several new options not previously proposed by the Commission, WCA’s answer to the inquiry remains the same – the 1910-1916/1990-1996 MHz band is the only viable spectrum to which MDS channels 1 and 2/2A can be relocated. Indeed, WCA believes that the most effective and efficient allocation of the bands presently before the Commission is as follows:

- 1910-1916 MHz – reallocate for relocated MDS licensees as contemplated by the MDS Industry Compromise; limit to customer-to-base transmissions; and subject to broadband PCS technical rules, but require licensees to meet the TIA/EIA-98-E out-of-band emissions mask specification of -76 dBm/MHz at 1930-1990 MHz to protect existing base-to-customer broadband PCS operations.
- 1916-1920 MHz – reallocate for isochronous unlicensed personal communications service (“UPCS”) use, creating a contiguous block from 1916-1930 MHz for isochronous UPCS applications.
- 1990-1996 MHz – reallocate for relocated MDS licensees as contemplated by the MDS Industry Compromise; limit to base-to-customer transmissions; and subject to broadband PCS technical rules.
- 1996-2000 MHz – reallocate for asynchronous UPCS or other low-power unlicensed use under rules that fully protect adjacent channel operations of relocated MDS and Mobile Satellite Service (“MSS”) licensees.
- 2020-2025 MHz – reallocate for asynchronous UPCS or other low-power unlicensed use under rules that fully protect adjacent channel operations of relocated MDS and MSS licensees.
- 2155-2180 MHz – reallocate to AWS for asymmetric use in conjunction with the 1710-1755/2110-2155 MHz band; limit to base-to-customer transmissions; and subject to broadband PCS technical rules.

WCA’s conclusion is based on a simple application of the “good neighbor” policy advanced by the Commission’s Spectrum Policy Task Force. The Commission’s recent experience in identifying appropriate spectrum in which MSS licensees can provide their Ancillary Terrestrial Component makes one thing perfectly clear – spectrum that is used for base station transmissions cannot be located in close proximity to spectrum used for customer transmissions even with advances in the state-of-the-art for filtering of out-of-band emissions.

With this in mind, the Commission's objective must be to assure that relocated MDS licensees suffer no greater risk of interference than they do today. And, presumably, the Commission will want to assure that the services adjacent to any new MDS allocation are reasonably immune to interference from MDS. As is demonstrated by the engineering statements accompanying this pleading, none of the alternatives advanced in the *Third NPRM* come close to achieving these objectives other than WCA's proposal for moving MDS to the 1910-1916/1990-1996 MHz bands.

Furthermore, the Commission's approach to the forced relocation of licensees heretofore has always been focused on making those affected by relocation whole. While the policies adopted by the Commission to make relocated point-to-point microwave licensees whole may provide a useful starting point here, they will have to be substantially modified to reflect the material differences between MDS and the services that have been relocated under those policies. Fundamental fairness, as well as well-established law, mandate that the Commission set aside 12 MHz of replacement spectrum for MDS and that the Commission assure MDS licensees and lessees of full compensation for all expenses incurred in connection with any relocation.

Finally, the record before the Commission in WT Docket No. 02-55 has established beyond peradventure that the Commission can resolve the interference that Nextel causes to public safety operations in the 800 MHz band without capitulating to Nextel's demand that it be awarded a nationwide license in the 1910-1915/1990-1995 MHz band in exchange for a hodgepodge of licenses in the 700 MHz, 800 MHz and 900 MHz bands.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Amendment of Part 2 of the Commission's)
Rules to Allocate Spectrum Below 3 GHz for) ET Docket No. 00-258
Mobile and Fixed Services to Support the)
Introduction of New Advanced Wireless)
Services, including Third Generation Wireless)
Systems)

**COMMENTS IN RESPONSE TO
THIRD NOTICE OF PROPOSED RULEMAKING**

The Wireless Communications Association International, Inc. ("WCA") hereby submits its comments in response to the *Third Notice of Proposed Rulemaking* ("*Third NPRM*") in the above-captioned proceeding.¹ For the reasons set forth below, WCA reiterates what it has long been saying: (i) the only viable spectrum to which Multipoint Distribution Service ("MDS") licensees in the 2150-2162 MHz band can be relocated is at 1910-1916 MHz and 1990-1996 MHz; and (ii) while the policies adopted by the Commission to make relocated point-to-point microwave licensees whole may provide a useful starting point, they will have to be substantially modified to reflect the material differences between MDS and the services that have heretofore been relocated under those policies.

I. INTRODUCTION.

As the trade association of the wireless broadband industry, WCA (whose members include the licensees and/or lessees of the vast majority of MDS stations in the 2150-2162 MHz

¹ *Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including*
(continued on next page)

band) has actively participated in each of the prior phases of this proceeding.² WCA's theme has been consistent throughout. Unlike any other group of licensees that has ever been threatened with involuntary relocation, and despite the fact that the Commission's prior auction of the MDS band gives MDS licensees far stronger arguments against reallocation than any prior group of licensees confronted with possible relocation, the MDS industry has not resisted the Commission's efforts to relocate MDS from the 2150-2162 MHz band in order to clear that spectrum for Advanced Wireless Services ("AWS").

To the contrary, WCA has expressed the willingness of MDS licensees to relocate, so long as the Commission treats those affected by the relocation (whether licensees, the system operators that lease channel capacity from licensees, or the consumers who receive services from system operators and in some cases have purchased equipment) in a manner that is fundamentally fair and that permits flexible use similar to that afforded MDS licensees in the 2500-2690 MHz band. Indeed, WCA (along with the major holders of MDS spectrum) presented the Commission with the only comprehensive plan for relocating MDS that has been

Third Generation Wireless Systems, FCC 03-16, ET Docket No. 00-258 (rel. Feb. 10, 2003) [*"Third NPRM"*].

² See, e.g., Comments of Wireless Communications Ass'n Int'l, ET Docket No. 00-258 (filed Feb. 22, 2001) [*"WCA NPRM Comments"*]; Reply Comments of Wireless Communications Ass'n Int'l, ET Docket No. 00-258 (filed March 9, 2001) [*"WCA NPRM Reply Comments"*]; Comments of Wireless Communications Ass'n Int'l on Final Report, ET Docket No. 00-258 (filed Apr. 16, 2001); Comments of Wireless Communications Ass'n Int'l on Further Notice of Proposed Rulemaking, ET Docket No. 00-258 (filed Oct. 22, 2001) [*"WCA FNPRM Comments"*]; Reply Comments of Wireless Communications Ass'n Int'l on Further Notice of Proposed Rulemaking, ET Docket No. 00-258 (filed Nov. 8, 2001) [*"WCA FNPRM Reply Comments"*]. See also Comments of Wireless Communications Ass'n Int'l, WT Docket No. 02-353 (filed Feb. 7, 2003) [*"WCA AWS Service Rules Comments"*]; Reply Comments of Wireless Communications Ass'n Int'l, WT Docket No. 02-353 (filed Mar. 14, 2003) [*"WCA AWS Service Rules Reply Comments"*].

filed to date.³ At the same time, however, in response to indications that the Commission does not feel compelled to treat MDS licensees (almost all of whom acquired their spectrum at substantial cost either through auction or secondary market transactions approved by the Commission) fairly, WCA has made it clear that if the Commission does not provide appropriate relocation spectrum for MDS licensees and assure full compensation of relocation costs, the Commission will have no choice but to reverse the reallocation of the 2110-2155 MHz band for AWS and restore MDS to the 2150-2162 MHz band.⁴

As WCA's recent petition for reconsideration of the *Second Report and Order* and its comments and reply comments in WT Docket No. 02-353 – the AWS service rules proceeding – make clear, WCA is frustrated that a cloud of uncertainty has hung over the heads of MDS licensees for more than two years now, and that despite significant efforts by WCA, the Commission is no closer today to identifying relocation spectrum and fair relocation policies than it was when this proceeding commenced. Here, the history of the Commission's consideration of the future of the 2150-2162 MHz band is instructive, if for no other reason than it illustrates that the *Third NPRM* ignores a substantial record that has already been developed on the issue, and suggests alternatives that clearly are not viable. More specifically:

³ See Letter from Wireless Communications Ass'n Int'l, *et al.*, to Michael K. Powell, Chairman, Federal Communications Commission, ET Docket No. 00-258 (filed July 11, 2002). The full text of the proposal, titled "A Compromise Solution for Relocating MDS From 2150-2162 MHz," was attached to that letter and is referred to herein as the "MDS Industry Compromise." A copy of the MDS Industry Compromise is annexed as Attachment A.

⁴ See Petition for Reconsideration of Wireless Communications Ass'n Int'l, ET Docket No. 00-258, at 14 (filed Feb. 24, 2003); WCA AWS Service Rules Comments at 7; WCA AWS Service Rules Reply Comments at 1-6.

The First Notice of Proposed Rulemaking. Even prior to the adoption of its initial *Notice of Proposed Rulemaking* (“NPRM”) in this docket over two years ago, the Commission recognized that MDS broadband service provides unique and substantial benefits to the public that are not being provided by traditional wireline technologies. Most important, the Commission found that (1) “[t]he growth of [MDS] two-way service is intended to provide affordable service to those market sectors that are more likely to be underserved and provide a competitive choice to consumers in more urban and more affluent markets,”⁵ and (2) “in rural or otherwise underserved markets in the country, [MDS] may be the sole provider of broadband service.”⁶ Logically, then, the Commission requested comment on the impact reallocation of MDS spectrum for AWS would have on the viability of MDS wireless service. The Commission also asked MDS licensees to comment on “what effect reallocation or relocation of the 2150-2162 MHz band would have on their current and planned use of the spectrum.”⁷ Finally, the Commission invited comment on whether it should apply its existing microwave relocation procedures to displacement of any incumbent MDS licensees.⁸

In response, WCA and the major holders of MDS spectrum rights submitted detailed comments describing the current and planned use of the band and the unsuitability of the Commission’s existing microwave relocation procedures to any relocation of MDS incumbents

⁵ “Interim Report - Spectrum Study of the 2500-2690 MHz Band: The Potential for Accommodating Third Generation Mobile Systems,” ET Docket No. 00-232, *FCC Staff Report*, at 22-23 (Nov. 15, 2000) [“3G Interim Report”].

⁶ *Id.* at 22.

⁷ *Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems*, 16 FCC Rcd 596, 619 (2001) [“NPRM”].

⁸ *See id.*

out of the 2150-2162 MHz band.⁹ In particular, WCA emphasized that the Commission's relocation policies have been applied to services that are fundamentally different from MDS, and that those policies therefore fail to address considerations that are uniquely relevant to making whole existing MDS licensees, the system operators who lease MDS channels, and consumers.¹⁰ WCA provided the Commission with an extensive list of those considerations,¹¹ including but not limited to the following:

- MDS would be the first mass-market consumer service to be relocated by the Commission. As such, the quantity and the quality of the spectrum that must be provided to make MDS licensees whole will be substantially different from that necessary to make whole licensees in other services subject to the microwave relocation rules.
- In addition to the costs associated with acquiring new customer premises equipment to replace existing equipment (which obviously must be reimbursed), operators will incur expenses in connection with either (1) the diversion of their own personnel from the task of marketing and installing new subscribers to the task of relocation, or (2) hiring additional personnel to perform relocation-related functions. MDS operators will incur extraordinary expenses to notify subscribers that their customer premises equipment must be replaced, to schedule appointments for such replacement, and to then supervise and successfully complete innumerable truck rolls and equipment change-outs. Although in the past the Commission has not provided for reimbursement of internal costs, such a policy would be grossly unfair under these circumstances.¹² Moreover, because system operators do not have unlimited resources to devote to relocation *and* expanding their existing operations, every resource that an MDS operator devotes to relocation is one *not* devoted to marketing MDS broadband service aggressively in direct competition with cable modem and DSL service, including DSL provided by the ILECs (some of whom, through their wireless subsidiaries and affiliates, are the very same entities attempting to relocate MDS incumbents out of the 2150-2162 MHz band). Because the personnel that

⁹ See, e.g., WCA NPRM Comments at 41-43, 50-52; Comments of Sprint Corporation, ET Docket No. 00-258, at 26-28 (filed Feb. 22, 2001); Comments of Nucentrix Broadband Networks, ET Docket No. 00-258, 9-14, 17-19 (filed Feb. 22, 2001)[“Nucentrix NPRM Comments”]; Comments of WorldCom, Inc., ET Docket No. 00-258, at 26-27 (filed Feb. 22, 2001)[“WorldCom NPRM Comments”].

¹⁰ See WCA NPRM Comments at 49.

¹¹ See generally *id.* at 50-52.

¹² Cf. 47 C.F.R. § 101.75(a)(1) (no reimbursement required for “internal resources devoted to the relocation process”).

have been hired, trained, and paid to add new subscribers will be diverted to the relocation effort, MDS-based broadband systems inevitably will lose potential subscribers to competing cable modem and DSL services.

- A relocation of MDS from the 2150-2162 MHz band would represent the first relocation of a service in which licensees routinely lease capacity to system operators who invest substantial sums in reliance on the availability of that capacity. Thus, the Commission's relocation policies would require a substantial overhaul to assure that those lessees are made whole, as well as the MDS licensees. Particularly at a time when the Commission is attempting to promote the use of secondary market transactions (such as leasing) to alleviate spectrum shortages, it would be unthinkable for the Commission to leave lessees without redress in the case of a forced relocation.¹³
- At the time the *NPRM* was released, at least one operator of MDS-based broadband services was selling customer premises equipment at retail, and many operators are planning on such sales in the near future. As a result, the Commission's relocation policies will need to be expanded to assure that consumers who have purchased MDS customer premises equipment are made whole.
- An MDS system (whether a broadband system or a video system) is comprised of facilities licensed to multiple licensees operating on multiple channels. Historically, the Commission has utilized a "selective relocation" policy under which the newcomer was free to pick and choose the facilities it will relocate (provided no interference was caused).¹⁴ Such a policy could be disastrous here, since it threatens to Balkanize MDS deployment into multiple bands that would vary from market to market, depriving the MDS industry of economies of scale in the design and manufacturing of equipment. The Commission must facilitate a simultaneous migration of all MDS licensees from 2150-2162 MHz to any new spectrum, and not allow someone else to pick and choose which stations will be relocated.

Significantly, the parties who openly supported displacing MDS licensees had virtually nothing to say about the issues discussed above, and made no serious attempt to identify any viable replacement spectrum.¹⁵ Simply put, on the question of how, when and where to relocate

¹³ See *Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets*, 15 FCC Rcd 24203 (2000).

¹⁴ See, e.g., *Amendments to the Commission's Rules Regarding a Plan for Sharing Costs of Microwave Relocation*, 11 FCC Rcd 8825, 8845 (1996) [*"Microwave Cost-Sharing Order"*]; 47 C.F.R. § 101.75(a).

¹⁵ See generally WCA NPRM Reply Comments at 18-24.

MDS licensees to accommodate AWS, the position of those parties (adopted, unfortunately, in the *Second Report and Order*) was “just do it” – the substantial and unprecedented legal, technical, economic and public policy implications of relocating MDS licensees from the 2150-2162 MHz band were mere inconveniences that merited no substantive discussion.¹⁶

The Further Notice of Proposed Rulemaking. With all of the above in hand, on August 20, 2001, the Commission issued a *Memorandum Opinion and Order and Further Notice of Proposed Rulemaking* in this proceeding, in which it sought comment on whether it should reallocate the 2150-2160 MHz band for AWS.¹⁷ The Commission again requested comment on the impact of reallocating the 2150-2160 MHz band for AWS, and again asked commenting parties to identify other frequency bands that might serve as replacement spectrum.¹⁸ Ignoring the undisputed record evidence that its existing microwave relocation policies were inappropriate for the relocation of MDS, the Commission again sought comment on the applicability of those policies to MDS and the “types and magnitude of costs to relocate incumbent [MDS] operations.”¹⁹ In other words, in most material respects the *FNPRM*’s inquiry as to the relocation of MDS from the 2150-2162 MHz band was similar to that in the *NPRM*.

WCA’s response to the *FNPRM* was cooperative and straightforward: it advised the Commission that while MDS licensees would strongly prefer to remain in the 2150-2162 MHz

¹⁶ While certain mobile carriers offhandedly suggested that the Commission could move MDS incumbents from the 2150-2162 MHz band to the 2155-2165 MHz band, WCA demonstrated on reply that this idea was seriously flawed. *See id.* at 31-34. Perhaps not coincidentally, those carriers did not submit their proposals again.

¹⁷ *Amendment of Part 2 of the Commission’s Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems*, 16 FCC Rcd 16043, 16061 (2001) [“*FNPRM*”].

¹⁸ *See id.*

¹⁹ *Id.*

band, they would be willing to move to new spectrum if, among other things, appropriate replacement spectrum were identified and those seeking to displace MDS licensees were required to bear all related relocation costs.²⁰ In addition, WCA again demonstrated why the Commission's existing microwave relocation policies were not appropriate for MDS, repeating the relevant considerations it had already identified in the comments it had submitted eight months earlier in response to the *NPRM*.²¹

Once more, however, those seeking to displace MDS licensees from the 2150-2162 MHz band failed to answer the call. No party challenged WCA's proposed relocation criteria for MDS. In fact, *all parties who addressed the issue agreed that relocated MDS licensees must receive 12 MHz of replacement spectrum and be fully compensated for the costs associated with any relocation.*²² Yet, the advocates for clearing the 2150-2162 MHz band again did not demonstrate that any appropriate replacement spectrum exists. Instead, relying on rhetoric in lieu of technical analysis, those parties suggested a handful of bands as possible replacement spectrum for MDS licensees displaced from the 2150-2162 MHz band.²³ On reply, WCA submitted a detailed response showing that those alternatives were not feasible.²⁴ None of the parties in question submitted responsive technical information or otherwise took issue with WCA's assessment of their proposals.

²⁰ See, e.g., WCA FNPRM Comments at 5-6, 16-17.

²¹ See *id.* at 10-14.

²² See, e.g., Comments of Motorola, Inc., ET Docket No. 00-258, at 13 (filed Oct. 22, 2001) ["Motorola FNPRM Comments"]; Comments of Nortel Networks, ET Docket No. 00-258, at 5-6 (filed Oct. 19, 2001); Reply Comments of Cingular Wireless LLC, ET Docket No. 00-258, at 4 (filed Nov. 8, 2001).

²³ See WCA FNPRM Reply Comments at 4.

²⁴ See *id.* at 4-16.

The MDS Industry Compromise. Seeing that their opponents were unenthusiastic about helping the Commission identify comparable replacement spectrum, last July WCA and the major MDS stakeholders took matters into their own hands and submitted a highly detailed and comprehensive compromise proposal to relocate MDS licensees from the 2150-2162 MHz band to the 1910-1916 MHz and 1990-1996 MHz bands.²⁵ The specifics of that proposal have been a matter of public record for over seven months and, while they need not be repeated *verbatim* here, are incorporated by reference. Most important, the MDS Industry Compromise is a quintessential “win-win” solution, since (1) it clears the 2150-2162 MHz band of MDS incumbents and does so quickly because of the ready availability of replacement equipment, thus permitting an auction of the 2110-2155 MHz band (if not a larger band for asymmetric service) for AWS;²⁶ (2) although the plan takes away some of the operational flexibility that MDS

²⁵ Specifically, it was proposed that licensees of MDS channel 1 receive the 1910-1913/1990-1993 MHz band and that the licensees of MDS channel 2/2A receive the 1913-1916/1993-1996 MHz band. *See* MDS Industry Compromise at 2-3. While it has been suggested by one party to this proceeding that affording MDS licensees paired spectrum constitutes a “windfall,” nothing could be further from the truth. *See* Comments of Cellular Telecommunications & Internet Ass’n, ET Docket No. 00-258, at 7 (filed Aug. 8, 2002) [“Cingular Comments”]. As discussed below, one of the critical features of MDS channels 1 and 2/2A is that they each can be used for stand-alone two-way services using time division duplex (“TDD”) technology. Yet, the ability of MDS licensees to deploy TDD technology is at the core of the difficulty in finding replacement spectrum, since substantial guardbands are required to separate TDD services from frequency division duplex (“FDD”) services. Thus, while WCA has expressed the willingness of MDS licensees to forego the ability to deploy TDD technology, MDS licensees must continue to have the ability to provide stand-alone two-way services. Affording MDS licensees paired spectrum therefore is an essential *quid pro quo* for eliminating their current freedom to use TDD.

²⁶ Agreeing with the point made in the MDS Industry Compromise, the *Third NPRM* acknowledges that pairing the bands immediately above the current PCS allocation “could allow for use of existing PCS equipment with little modification and easier manufacture and design of equipment, thereby enabling significant economies of scale.” *Third NPRM* at ¶ 46. As such, using those bands for relocating MDS will not only expedite the relocation, but will result in reduced costs for the winners of the 1.7/2.1 GHz auction who ultimately must provide replacement equipment to MDS licensees.

licensees currently enjoy at 2150-2162 MHz, it is acceptable to MDS because it eliminates the crippling threat of relocation and permits MDS licensees to move forward quickly with their business plans; and (3) the plan may be implemented without causing harmful interference or otherwise having any adverse impact on any incumbent stakeholder. To date only three parties have opposed the MDS Industry Compromise, and WCA has already rebutted their objections.²⁷ Significantly, *neither the opponents of the MDS Industry Compromise nor any other party submitted an alternative relocation proposal that is feasible, much less superior.*

The Second Report and Order. Hence, as of the November 7, 2002 adoption of the *Second Report and Order* in this docket, the Commission had twice requested and received comment on the impact of displacing MDS licensees out of the 2150-2162 MHz band, twice requested and received comment on whether it should apply its existing microwave relocation policies to those licensees, and twice requested and received proposals as to possible replacement spectrum. The Commission also had ample opportunity to review the MDS Industry Compromise, and interested parties had ample opportunity to, and did, comment on that proposal.²⁸ In the *Second Report and Order*, however, the Commission formally reallocated the 2150-2155 MHz band for AWS without identifying any replacement spectrum for MDS

²⁷ See Letter from Wireless Communications Ass'n Int'l *et al.*, WT Docket No. 02-55 (filed Sept. 23, 2002); Letter from Wireless Communications Ass'n Int'l *et al.*, ET Docket No. 00-258, IB Docket No. 01-185 and ET Docket No. 95-18 (filed Sept. 5, 2002) ["WCA September 5 Letter"]; Letter from Wireless Communications Ass'n Int'l *et al.*, ET Docket No. 00-258, IB Docket No. 01-185, ET Docket No. 95-18 and WT Docket No. 02-55 (filed Aug. 29, 2002) ["WCA August 29 Letter"].

²⁸ See Letter from Regina M. Keeney, Counsel for Nextel Communications, to the Federal Communications Commission, ET Docket No. 00-258 (Aug. 9, 2002); Comments of ICO Global Communications, ET Docket No. 00-258 (filed Aug. 8, 2002); Cingular Comments.

licensees or establishing relocation compensation policies.²⁹ Instead, the Commission again punted all issues relating to MDS relocation to a *third* notice of proposed rulemaking, in which it has repeated the questions that have already been asked and answered in the *NPRM* and *FNPRM*.³⁰ Thus, more than two years after those questions were first raised in the *NPRM*, the *Third NPRM* effectively brings the process back to square one.

Compounding the substantial financial and operational burdens this delay has imposed on the MDS industry, the Commission has raced ahead to lock in the spectrum at 2 GHz at which the Mobile Satellite Service (“MSS”) will operate, to authorize MSS licensees to operate an ancillary terrestrial component (“ATC”) and to adopt service rules for ATC in IB Docket No. 01-185, and adopt service rules (including technical rules) in WT Docket No. 02-353 to govern the operation of AWS facilities in the 1710-1755/2110-2155 MHz band.³¹ As WCA has previously

²⁹ See *Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems*, 17 FCC Rcd 23193, 23212-13 (2002).

³⁰ See *Third NPRM* at ¶ 72 (“We seek comment on the amount and location of spectrum needed to relocate MDS operations at 2150-2160/62 MHz.”); *id.* at ¶ 73 (“We also seek additional comment on the appropriate relocation spectrum for MDS. Comments should address what spectrum should be used to accommodate existing MDS operations and how such spectrum is adequate to provide comparable facilities to minimize disruption to existing services.”). As discussed in Section II.B herein, the *Third NPRM* does not cure the legal flaws in the *Second Report and Order* identified in WCA’s Petition for Reconsideration of that decision, and in fact appears to pull the Commission even further from a feasible, legally sustainable solution to the MDS relocation issue. Among other things, the Commission stubbornly refuses to acknowledge that its existing microwave relocation policies were designed for point-to-point, non-consumer services, and thus are poorly suited to the point-to-multipoint, consumer-based services provided by MDS. Indeed, the *Third NPRM* reads as if the substantial record created by WCA and others on that point does not exist — virtually all of the language used by the Commission on this issue appears to have been taken *verbatim* from its microwave relocation orders in its *Emerging Technologies* proceeding which, again, were applied to point-to-point, non-consumer services. See *Third NPRM* at ¶ 71.

³¹ See *Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services*, ET (continued on next page)

demonstrated and is made clear herein (particularly in the engineering analyses that accompany these comments), those developments have substantially reduced the options available to the Commission for relocating MDS.³²

Without question, the Commission faces a difficult challenge in this proceeding. Unfortunately, despite the record developed in response to the *NPRM*, *FNPRM* and the MDS Industry Compromise, the *Third NPRM* does not always point in the right direction. Quite frankly, in places the *Third NPRM* seems focused more on identifying the very least the Commission is legally required to do for MDS licensees than on identifying an approach that is fair to MDS licensees (virtually all of whom acquired their spectrum either at auction or in the secondary market), whose only crime is to be licensed on spectrum that the Commission wants to use for other purposes. With these comments, WCA will attempt to get the Commission back on track.

II. DISCUSSION.

A. The Most Efficient And Effective Use Of The Bands Under Consideration Requires The Reallocation Of 1910-1916 MHz And 1990-1996 MHz For Relocated MDS.

With the *Third NPRM*, the Commission has called upon commenting parties to discuss “specific proposals that will allow for the most efficient and effective use” of the 1910-1930

Docket No. 00-258, FCC 03-16 at ¶¶ 16-20 (rel. Feb. 10, 2003) [*“Third Report and Order”*]; *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands*, IB Docket No. 01-185, FCC 03-15 (rel. Feb. 10, 2003) [*“MSS Flexible Use R&O”*]; *Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, 17 FCC Rcd 24135 (2002) [*“AWS Service Rules NPRM”*].

³² See WCA AWS Service Rule comments at 1-4; WCA AWS Service Rules Reply Comments at 1-6.

MHz, 1990-2000 MHz, 2020-2025 MHz and 2155-2180 MHz bands.³³ At the same time, the Commission has recognized that it must finally satisfy the commitment it made in the *Second Report and Order* to identify relocation spectrum for MDS.³⁴ For the reasons set forth below, WCA submits that the Commission can achieve these objectives by allocating the bands as follows:

- 1910-1916 MHz – reallocate for relocated MDS licensees as contemplated by the MDS Industry Compromise; limit to customer-to-base transmissions; and subject to broadband PCS technical rules, but require licensees to meet the TIA/EIA-98-E out-of-band emissions mask specification of -76 dBm/MHz at 1930-1990 MHz to protect existing base-to-customer broadband PCS operations.
- 1916-1920 MHz – reallocate for isochronous unlicensed personal communications service (“UPCS”) use, creating a contiguous block from 1916-1930 MHz for isochronous UPCS applications.³⁵
- 1990-1996 MHz – reallocate for relocated MDS licensees as contemplated by the MDS Industry Compromise; limit to base-to-customer transmissions; and subject to broadband PCS technical rules.
- 1996-2000 MHz – reallocate for asynchronous UPCS or other low-power unlicensed use under rules that fully protect adjacent channel operations of relocated MDS and MSS licensees.
- 2020-2025 MHz – reallocate for asynchronous UPCS or other low-power unlicensed use under rules that fully protect adjacent channel operations of relocated MDS and MSS licensees.

³³ See *Third NPRM* at ¶ 38.

³⁴ See *id.* at ¶ 3.

³⁵ The Commission has stated, albeit without citing to any supporting evidence, that “[w]e believe that if existing MDS licensees deployed more robust, spectrally efficient equipment upon relocation, WCA’s proposal could also be implemented within the 1910-1915 and 1990-1995 MHz bands.” *Id.* at ¶ 45 n. 128. WCA will view with interest whether commenting parties present the Commission with any evidence that such equipment exists (remembering that MDS broadband is a relatively new phenomenon and that the equipment used at deployment was generally state-of-the-art) and whether those advocating such a solution are prepared to compensate MDS licensees and system operators for increased equipment costs and their loss of spectrum.

- 2155-2180 MHz – reallocate to AWS for asymmetric use in conjunction with the 1710-1755/2110-2155 MHz band; limit to base-to-customer transmissions; and subject to broadband PCS technical rules.

WCA’s conclusion that this is the most efficient and effective approach is derived from two fundamental considerations: (1) the bands at issue should be reallocated consistent with the “good neighbor” concept trumpeted by the Commission’s Spectrum Policy Task Force, in order to minimize the need for wasteful guardbands and/or the imposition of unreasonably restrictive limitations on out-of-band emissions that effectively force licensees to waste spectrum for guardbands; and (2) the 1910-1916 MHz and 1990-1996 MHz bands are the only viable alternatives for relocating MDS licensees displaced by the *Second Report and Order*.

Before turning to the specific bands at issue in this proceeding, WCA must underscore the essential role that the “good neighbor” policy must play here. One of the most important recommendations contained within the November 2002 *Report* of the Spectrum Policy Task Force is that the Commission “group technically compatible systems and devices in close spectrum proximity.”³⁶ More specifically, the Task Force “recommends that the Commission rely primarily on its general spectrum management authority to consider whether future allocations should be grouped based on mutually-compatible technical characteristics.”³⁷ As explained in the report of the Task Force’s Interference Protection Working Group:

The Commission’s mission is “to promote the public interest through a fully competitive marketplace – with access for all Americans to communications services – in a cost-effective, efficient, and transparent regulatory environment.” To realize this mission, spectrum managers should allocate spectrum to radiocommunications services within the same frequency band or to services in

³⁶ Report of the Spectrum Policy Task Force, ET Docket No. 02-135, at 22 (rel. Nov. 15, 2002) [“Spectrum Policy Task Force Report”].

³⁷ *Id.*

adjacent frequency bands in a way that places the fewest technical and regulatory constraints on all of the services in that spectrum.³⁸

The Spectrum Policy Task Force's "good neighbor" policy is no stranger to this proceeding. Indeed, even before the Task Force's Report was released, WCA was espousing the concept in demonstrating that a variety of proposed relocation bands would not be viable because MDS operations and those of the proposed new spectrum neighbors were not compatible.³⁹ More recently, the Commission's decision in the *Third Report and Order* to locate the MSS uplink band at 2000-2020 MHz, despite the resulting reduction in the amount of globally-harmonized MSS spectrum, was driven by the "good neighbor" policy. Specifically, the Commission recognized that the broadband PCS industry uniformly employed the 1930-1990 MHz band for base-to-customer transmissions, and that interference to reception at PCS customer equipment would occur were MSS/ATC systems to engage in customer-to-base transmissions on nearby spectrum.⁴⁰ Thus, the Commission separated the PCS base-to-customer transmissions from the MSS/ATC customer-to-base transmissions by 10 MHz, imposed a more stringent out-of-band emissions mask on MSS/ATC handsets and required MSS licensees to cure any interference that occurs despite these prophylactic measures.⁴¹

The same consideration that led the Commission to separate MSS/ATC from broadband PCS (*i.e.* that customer-to-base operations cannot co-exist adjacent to base-to-customer operations) must drive the Commission's evaluation of the issues raised by the *Third NPRM*. As

³⁸ Report of the Interference Protection Working Group of the Spectrum Policy Task Force, ET Docket No. 02-135, at 20 (rel. Nov. 15, 2002)

³⁹ See, e.g. MDS Industry Compromise at 7-13; WCA September 5 Letter at 3-5; WCA August 29 Letter at 8-10.

⁴⁰ See *Third Report and Order* at ¶ 35.

⁴¹ See *id.*; *MSS Flexible Use R&O* at ¶ 119.

will be discussed in detail below, several of the alternatives proposed in the *Third NPRM* simply are not viable because there is inadequate spectrum available to provide the requisite guardband separation between customer-to-base and base-to-customer transmissions. However, by embracing the Spectrum Policy Task Force's "good neighbor" policy and encouragement of additional allocations for low-power unlicensed applications that can operate without interference to licensed services,⁴² WCA has crafted a bandplan that results in the most efficient and effective use of the spectrum at issue in this proceeding (and relocates MDS licensees from the 2150-2162 MHz band in a manner that is fundamentally fair).

1. The 1910-1930 MHz And 1990-2000 MHz Bands.

Although the Commission had previously raised the possibility of reallocating the entire 1910-1930 MHz band for AWS,⁴³ in the *Third NPRM* the Commission announced that it is no longer proposing to reallocate the 1920-1930 MHz portion of the UPCS band to support AWS.⁴⁴ The Commission recognized that "UPCS equipment manufacturers, distributors, and end users have invested considerable efforts and resources in the development and deployment of isochronous devices in the 1920-1930 MHz band, and that re-designation of the 1920-1930 MHz band for AWS would upset the reasonable expectations of those parties."⁴⁵ WCA certainly agrees with that sentiment (and trusts that the Commission will display the same sensitivity to reasonable expectations when it comes time to determine the fate of MDS licensees and lessees).

⁴² See Spectrum Policy Task Force Report at 39-40.

⁴³ See *FNPRM*, 16 FCC Rcd at 16048.

⁴⁴ See *Third NPRM* at ¶ 46.

⁴⁵ *Id.*

Thus, the question becomes “what is the best use of the 1910-1920 MHz band?” That band is currently allocated for asynchronous UPCS, yet the record demonstrates conclusively that there is no use of the band whatsoever in the United States.⁴⁶ WCA appreciates that compensation will be required for the efforts undertaken by UTAM to clear the 1910-1920 MHz band for use by asynchronous UPCS; indeed, WCA’s proposed approach to such compensation in the MDS Industry Compromise remains the best take on the issue and should be adopted.⁴⁷ With fair compensation, however, there is no reason why the Commission could not readily relocate asynchronous UPCS to alternative spectrum (such as the 1996-2000 MHz and/or 2020-2025 MHz bands identified for low-power unlicensed use under WCA’s proposal).

The rationale for clearing asynchronous UPCS from the 1910-1920 MHz band is simple and recognized in the *Third NPRM*. Because that band is immediately adjacent to the band used by broadband PCS for mobile transmissions, and because it can be readily paired with the spectrum immediately adjacent to the existing band used by broadband PCS for base station transmissions that was taken away from MSS in the *Third Report and Order*, it makes eminently good sense for the Commission to explore the use of those bands for FDD services that would

⁴⁶ See Motorola FNPRM Comments at 20; Comments of NEC America, ET Docket No. 00-258, at 23 (filed Oct. 22, 2001) [“NEC Comments”]; Reply Comments of ArrayComm, ET Docket No. 00-258, at 5 (filed Nov. 8, 2001) [“ArrayComm Reply Comments”].

⁴⁷ See MDS Industry Compromise at Appendix A, pp. 4-6. WCA notes with much concern the Commission’s statement that “[i]f the spectrum is to be used for the relocation of existing licensees, it *may* be inequitable to expect these relocated licensees to reimburse UTAM.” *Third NPRM* at ¶ 59 (emphasis added). There should be no doubt about it – it *would* be inequitable to require a licensee that is being involuntarily relocated to pay the costs associated with clearing its new spectrum. Thus, WCA proposed that the winners of the auctions for the current MDS spectrum be required to reimburse UTAM and broadband PCS licensees that cleared the 1910-1916 MHz band.

operate under PCS-like rules.⁴⁸ As discussed in more detail below, however, WCA believes that interference constraints preclude the Commission from allocating 1916-1920/1996-2000 MHz for PCS-like services. Thus, WCA believes that the 1916-1920 MHz band is best added to the existing 1920-1930 MHz isochronous UPCS allocation, and that a new low-power unlicensed allocation (perhaps designated for asynchronous UPCS) be established at 1996-2000 MHz.

WCA applauds the Commission for recognizing in the *Third NPRM* that by convention PCS utilizes the 1850-1910 MHz band for mobile transmissions and the 1930-1990 MHz band for base station transmissions, and for proposing that any services introduced into the 1910-1920 MHz and 1990-2000 MHz bands be required to follow the convention for the adjacent PCS band.⁴⁹ Indeed, the MDS Industry Compromise proposed that the reallocated 1910-1916/1990-1996 MHz bands be subject to exactly that condition in order to protect broadband PCS from interference caused by operations in the 1910-1916/1990-1996 MHz bands.⁵⁰ The Commission's proposal in this regard is critical, for it is an implicit acknowledgement that while broadband PCS has been a resounding success, the minimalist Part 24 technical rules have worked only because of the industry's adoption of conventions that substantially restrict the flexibility afforded licensees under the Commission's rules.

While WCA supports the establishment of a 1910-1916/1990-1996 MHz pairing, the Commission's proposal to expand the new paired allocation to 1910-1920/1990-2000 MHz is seriously flawed.⁵¹ The problem, in a nutshell, is that absent a highly-restrictive spectral mask,

⁴⁸ See *Third NPRM* at ¶ 47.

⁴⁹ See *id.* at ¶¶ 50-51.

⁵⁰ See MDS Industry Compromise at 3.

⁵¹ See *Third NPRM* at ¶ 47.

mobile transmissions from a 1910-1920 MHz band would cause interference to the reception by handsets of base station transmissions in the 1930-1990 MHz band. As noted above, WCA is proposing that, consistent with the specifications set forth in TIA/EIA-98-E, operations in the new mobile band should be required to reduce their out-of-band emissions in the 1930-1990 MHz band to -76 dBm/MHz.⁵² As is discussed in detail in the report WCA recently commissioned from Marconi Wireless regarding the 1910-1920 MHz band (the “Marconi 1910-1920 MHz Report”), a copy of which is annexed as Attachment B, such a spectral mask is far more restrictive than even state-of-the-art commercially-viable filters can achieve without a guardband. The Marconi 1910-1920 MHz Report further states that even with coming advances in the state-of-the-art in handset design and manufacture, the minimum separation necessary between the highest spectrum used for mobile transmissions and the lowest spectrum used for base station transmissions will be at least 13.5 MHz. Thus, as a practical matter, the spectrum from 1916 to 1920 MHz is not going to be usable for PCS-like services – even if allocated for AWS, licensees would be forced to let that spectrum lay fallow in order to meet the required limitations on out-of-band emissions.⁵³

⁵² The *Third NPRM* specifically solicits comment on whether a tighter restriction on out-of-band emissions by licensees in the 1910-1920 MHz band is required to protect broadband PCS. See *id.* at ¶ 50.

⁵³ The same consideration should preclude any consideration of reallocating the 1910-1920 MHz band as a contiguous block of spectrum for MDS licensees relocated from the 2150-2162 MHz band. Leaving aside the problems discussed in Section II.B herein of reducing the quantity of spectrum allocated to MDS, devastating interference problems inevitably would result were MDS to operate using TDD technology in this band (which it would necessarily have to do if not assigned paired spectrum capable of supporting FDD operations). There had been some suggestion early in this proceeding that the 1910-1930 MHz band could be used for high-power TDD applications. See ArrayComm Reply Comments at 5-7; Comments of Siemens Corporation, ET Docket No. 00-258, at 2 (filed Oct. 19, 2001). Filings by Motorola, Verizon and others, however, leave no doubt that operation of MDS stations in the 1910-1930 MHz band would result in substantial interference to PCS operations in the adjacent bands. See Verizon (continued on next page)

Hence, rather than allow the 1916-1920 MHz band and the paired 1996-2000 MHz band to lay fallow, WCA believes that these two bands (both of which lie between base-to-customer and customer-to-base bands) can be used efficiently and effectively for UPCS. With respect to the 1916-1920 MHz band, WCA submits that the public interest will be best served by adopting the proposal advanced in the MDS Industry Compromise and repeated in the *Third NPRM* – expand the isochronous UPCS allocation to encompass the entire 1916-1930 MHz band.⁵⁴ Although legitimate questions have been raised as to whether demand for isochronous UPCS is as significant as the industry suggests, WCA does not doubt that isochronous UPCS would benefit from the addition of 4 MHz of spectrum. Meanwhile, the 1996-2000 MHz band can be designated as relocation spectrum for asynchronous UPCS or for some other similarly benign form of UPCS that does not threaten either the licensed base-to customer operations below the band or the customer-to-base operations above the band.⁵⁵

Comments, ET Docket No. 00-258, at 9-10 (filed Oct. 19, 2001); Motorola FNPRM Comments at 15-18; Reply Comments of Motorola, Inc., ET Docket No. 00-258, at 10-16 (filed Nov. 8, 2001). *See also* Comments of Cingular Wireless, LLC, ET Docket No. 00-258, at 12-13 (filed Oct. 22, 2001). Indeed, the primary proponent of relocating 2150-2162 MHz licensees to the 1910-1930 MHz band has subsequently conceded that its plan is unworkable unless MDS licensees agree to operate at far lower power levels than are today permitted under Part 21. *See* Reply Comments of the Ad Hoc MDS Alliance, ET Docket No. 00-258, at 9 (filed Nov. 8, 2001). *See also* MDS Industry Compromise at 9-10. Indeed, during those time intervals when a TDD system would be transmitting from customer equipment, the interference to broadband PCS at 1930-1990 MHz will be identical to that predicted were the 1916-1920 MHz band used for customer transmissions as part of an FDD system.

⁵⁴ *See id.* at 2-3; *Third NPRM* at ¶ 52.

⁵⁵ The Commission has solicited comment on whether this spectrum should be set aside for unlicensed use in the event the entire 1910-1920 MHz band cannot be used for an expanded PCS service without jeopardizing broadband PCS. *See id.* at ¶ 53. Also, the Commission questions whether the band could be used for point-to-point microwave services. *Id.* Given that the 1990-1996 MHz band will be used by customer equipment to receive base station transmissions and that such equipment will be deployed ubiquitously, point-to-point microwave facilities at 1996-

(continued on next page)

Use of the 1916-1930 MHz band for isochronous UPCS would be fully consistent with the Commission's "good neighbor" policy. Isochronous UPCS and broadband PCS base station transmissions have operated adjacent to each other for years without any indication of conflict. There is no reason to believe that placing isochronous UPCS adjacent to the band used for PCS-like customer transmissions will be problematic. Moreover, the record in this proceeding establishes that isochronous UPCS can operate immediately adjacent to an upstream broadband PCS-like service, as numerous proponents of isochronous UPCS have proposed that their allocation be expanded into the spectrum immediately adjacent to upstream broadband PCS spectrum.⁵⁶ Because WCA's proposal mandates that MDS operations in the 1910-1916 MHz band comport with the upstream broadband PCS rules, isochronous UPCS at 1916-1930 should readily be able to exist adjacent to relocated MDS stations at 1910-1916 MHz.⁵⁷ Moreover, there is nothing in the record to suggest that designation of 1996-2000 MHz for isochronous UPCS or some other benign form of UPCS should pose an interference threat either to the base-to-customer operations of the licensee of the 1910-1916/1990-1996 MHz pair or to customer-to-base MSS/ATC operations.

Similarly, use of the 1990-1996 MHz band operating under the broadband PCS rules will comport with the "good neighbor" policy. It is worth noting that in advocating the authorization

2000 MHz inevitably would cause interference to adjacent channel use of the 1990-1996 MHz band.

⁵⁶ See, e.g. NEC Comments at 23-25; Comments of Wireless Information Networks Forum, ET Docket No. 00-258, at 11-13 (filed Oct. 22, 2001).

⁵⁷ The Commission has solicited comment as to whether it should allow greater flexibility in UPCS use of the 1915-1930 MHz band. See *Third NPRM* at ¶ 52. WCA has no objection to providing greater flexibility, so long as that flexibility does not jeopardize the interference protection afforded to adjacent licensed service providers. Therefore, WCA intends to examine
(continued on next page)

of ATC throughout the entire 1990-2025 MHz band, the 2 GHz MSS licensees never suggested that any change in the broadband PCS out-of-band emissions limit of $-43 + 10\log(P)$ would be required to protect their terrestrial operations, despite the fact that MSS/ATC would be immediately adjacent to spectrum used for PCS base station transmissions. Given that WCA is now proposing a bandplan under which there will be 4 MHz of additional separation between the 1990-1996 MHz band and the lower portion of the MSS allocation (and thus even more protection than MSS implied it required for ATC), MSS licensees can hardly be heard to argue that licensees of the 1990-1996 MHz band should be required to comply with a more stringent $-70 + 10\log(P)$ spectral mask.⁵⁸

2. The 2020-2025 MHz Band

To avoid interference to the MSS/ATC customer-to-base operations authorized in the 2000-2020 MHz band, the Commission essentially has two options for allocating the 2020-2025 MHz band – it can either designate the band for AWS customer-to-base transmissions paired with spectrum elsewhere that can be used for base-to-customer transmissions, or it can designate the band for low-power unlicensed operations, such as asynchronous UPCS that is to be relocated from 1910-1920 MHz in accordance with WCA's proposal. For the reasons set forth below, WCA submits that the latter option is preferable.

carefully any proposed changes to the UPCS technical rules and will respond to any proposals that pose an interference threat.

⁵⁸ See *id.* at ¶ 51. Indeed, given the implicit representation by MSS interests that they could operate immediately adjacent to broadband PCS, it is remarkable that the *Third NPRM* suggests that licensees in the 1990-2000 MHz band should have an absolute obligation to provide protection to newly-authorized ATC operations. The Commission should clarify that as long as licensees in that band satisfy the out-of-band emissions restriction imposed upon them, they will have co-primary rights with MSS/ATC and not be required to undertake extraordinary efforts to cure any interference that may occur to MSS/ATC.

Although the *Third NPRM* does not discuss the 2020-2025 MHz band in detail, the pairing of the 2020-2025 MHz band with spectrum at 2155-2180 MHz is one alternative on which comment is sought.⁵⁹ However, there is no evidence in the *Third NPRM* (or anywhere in the record, for that matter) which suggests that the 2020-2025 MHz band can be utilized for AWS without debilitating interference from Broadcast Auxiliary Service (“BAS”) operations in the immediately adjacent 2025–2110 MHz band. To the contrary, the Society of Broadcast Engineers has submitted unrefuted evidence to the effect that BAS will cause significant interference to any PCS-like service (which would include AWS) in the 2020-2025 MHz band.⁶⁰ Given the pervasive nature of BAS operations in the very same urban areas where AWS is likely to find its greatest demand, use of the 2020-2025 MHz band for AWS would be doomed to failure due to interference.

As such, WCA submits that the most efficient and effective use of the 2020-2025 MHz band will be for low-power UPCS that can operate without risk to MSS/ATC use of the 2000-2020 MHz band. Reallocating the 2020-2025 MHz band for that purpose will not only provide a potential home for the asynchronous UPCS services being removed from 1910-1920 MHz, but generally will advance the Commission’s objective of increasing the spectrum available for unlicensed services.

3. The 2155-2180 MHz Band

In considering the future of the 2155-2180 MHz band, two factors must be given paramount consideration.

⁵⁹ See *id.* at ¶ 69.

⁶⁰ See Comments of Society of Broadcast Engineers, WT Docket No. 02-55, at 2 (filed May 6, 2002).

First, in the *MSS Flexible Use Report and Order*, the Commission has mandated that MSS licensees engaged in ATC operations employ the forward band mode.⁶¹ Thus, since the 2180-2200 MHz band is designated internationally for downlink satellite operations, the 2180-2200 MHz band will have to be utilized by MSS licensees for base-to-subscriber ATC transmissions.

Second, in all likelihood the Commission similarly will mandate in WT Docket No. 02-353 that the 2110-2155 MHz band be utilized for base-to-subscriber transmissions. Indeed, the comments submitted in response to the *Notice of Proposed Rulemaking* in that proceeding almost unanimously urge the Commission to license the 1710-1755/2110-2155 MHz band in channel pairs, to ban TDD services from the 1710-1755/2110-2155 MHz band and to restrict the 2110-2155 MHz band solely to base-to-subscriber transmissions so as to minimize the potential for interference among AWS licensees.⁶²

⁶¹ See *MSS Flexible Use R&O* at ¶ 108.

⁶² See Comments of AT&T Wireless, WT Docket No. 02-353, at 7-9 (filed Feb. 7, 2003) [“AT&T AWS Service Rules Comments”]; Comments of Cellular Telecommunications & Internet Ass’n, WT Docket No. 02-353, at 14 (filed Feb. 7, 2003) [“CTIA AWS Service Rules Comments”]; Comments of Ericsson, WT Docket No. 02-353, at 4-5, 7 (filed Feb. 7, 2003) [“Ericsson AWS Service Rules Comments”]; Comments of Motorola, WT Docket No. 02-353, at 7-8 (filed Feb. 7, 2003) [“Motorola AWS Service Rules Comments”]; Comments of Nokia, WT Docket No. 02-353, at 1-2 (filed Feb. 7, 2003) [“Nokia AWS Service Rules Comments”]. See also Comments of Verizon Wireless, WT Docket No. 02-353, at 5 (filed Feb. 7, 2003). But see Comments of Lucent Technologies, WT Docket No. 02-353, at 1-3 (filed Feb. 7, 2003) [“Lucent AWS Service Rules Comments”](recognizing that “deployment of TDD systems adjacent to paired allocations has typically raised interference concerns and is considered problematic,” urging that traffic be limited to one direction in each band pair “to avoid the uplink/downlink interference problem that can occur in adjacent frequency blocks,” but appearing to advocate that TDD be allowed in either of the paired blocks); Comments of Petrocom License Corp., WT Docket No. 02-353, at 8 (filed Feb. 7, 2003)(advocating no restrictions on transmission direction or TDD usage, without acknowledging, much less addressing, interference considerations).

That the 2110-2155 MHz and 2180-2200 MHz bands both will be used for base station transmissions means, as a practical matter, that the 2155-2180 MHz band will not be available for MDS. As WCA has previously noted, if MDS is relocated to 12 MHz of contiguous spectrum (whether in the 2155-2180 MHz band or elsewhere), MDS channels 1 and 2/2A will continue to be used by licensees as they can be used today – for base station transmission of video and data services, for customer-to-base transmissions in connection with FDD data services (usually paired with spectrum in the 2500-2690 MHz band), or for stand-alone TDD data services in which both upstream and downstream transmissions occur over the same spectrum.⁶³

It is the flexibility afforded MDS licensees under the current rules that is at the nub of the problem. The record, both in this proceeding and in WT Docket No. 02-353, demonstrates that if a station used for customer-to-base transmissions is located in proximity to the spectrum used for base station transmissions, interference is inevitable.

For example, as AT&T Wireless recently put it in addressing the future AWS service rules:

AT&T Wireless appreciates the Commission's commitment to technical flexibility, including the use of time division duplex ("TDD") technologies, but [] is concerned about the severe interference TDD causes to frequency division duplex ("FDD") operations in adjacent bands.⁶⁴

Along similar lines, Lucent Technologies recognized in the same proceeding that the "deployment of TDD systems adjacent to paired allocations has typically raised interference

⁶³ See, e.g., WCA AWS Service Rules Comments at 4-6.

⁶⁴ AT&T AWS Service Rules Comments at 8.

concerns and is considered problematic.”⁶⁵ Motorola argued that “if the Commission were to assign unpaired spectrum in the AWS bands, guard bands would be required between the paired and unpaired spectrum blocks, or TDD uses in the unpaired spectrum would need to be limited to low power devices suitable only for indoor environments.”⁶⁶ Nokia opposed the introduction of any TDD technology in any portion of the 2110-2170 MHz band (which includes some of the spectrum being considered for MDS relocation) because “[e]ven with the introduction of tighter RF filtering requirements, interference caused by TDD and FDD co-existence would be severe” and because TDD usage of the band would be inconsistent with global harmonization efforts.⁶⁷

AT&T Wireless further noted that:

ITU-R Working Party 8F has developed a report on the coexistence of IMT-2000 TDD and FDD radio interface technologies operating in adjacent bands and in the same geographical area at 2500-2690 MHz. The report concluded that base stations and mobile stations co-located or in close proximity to each other are likely to experience significant interference that would severely impact user service levels. In order to mitigate such interference, the required separation distances between base stations range from 1 km to 15 km depending upon the cell types involved and carrier separation used. Based on existing specifications and minimum coupling loss (“MCL”) assumptions, even a guard band of 5-10 MHz will not eliminate the problem. AT&T Wireless believes that similar separation distances would be required in the 1.7 GHz and 2.1 GHz bands if TDD technology were deployed.⁶⁸

To further explore this point, WCA has commissioned both LCC and Marconi to analyze the interference potential that would arise were MDS to use 12 MHz of the 2155-2180 MHz band for customer-to-base transmissions, either in connection with a TDD system or as part of an FDD system that uses spectrum in some other band for base-to-customer transmissions. In its

⁶⁵ Lucent AWS Service Rules Comments at 1.

⁶⁶ Motorola AWS Service Rules Comments at 8.

⁶⁷ Nokia AWS Service Rules Comments at 1-2.

⁶⁸ AT&T AWS Service Rules Comments at 8 n. 17.

report, a copy of which is annexed as Attachment C, LCC concludes that the interference potential is such that, regardless of whether MDS licensees utilize their spectrum for TDD or for customer-to-base FDD, a minimum of 10 MHz of separation would be required between the MDS spectrum and the closest AWS and MSS/ATC spectrum. Insofar as the entire band is just 25 MHz wide, there clearly is insufficient spectrum for relocated MDS licensees and two 10 MHz guardbands. As LCC puts it, “placing MDS anywhere in the 2155-2180 MHz band, would cause severe interference problems for all the systems (AWS, MDS and MSS/ATC), and would make practical deployment of these systems impossible.”

LCC is not alone in reaching that conclusion. WCA also requested that Marconi Wireless examine the possible relocation of MDS to the 2155-2180 MHz band, and the results of that examination are set forth in the report annexed as Attachment D (the “Marconi 2155-2180 MHz Report”). Like LCC, Marconi Wireless has analyzed the feasibility of relocating MDS to the 2155-2180 MHz band. And, like LCC, Marconi Wireless has concluded that, no matter where in the band MDS is placed, MDS TDD or upstream operations in the 2155-2180 MHz band are incompatible with the base-to-customer operations that will be in the adjacent AWS and MSS/ATC spectrum.

As such, WCA submits that the 2155-2180 MHz band simply cannot be utilized as relocation spectrum for MDS. Rather, the best use of the 2155-2180 MHz band is the use most consistent with the “good neighbor” policy – as spectrum to be used for AWS terrestrial base station transmissions. Although there have been suggestions over the years that AWS will require asymmetric pairings to accommodate the likelihood that far more information will be transmitted from the network than to the network, the Commission has heretofore only made symmetric pairings available for such services. Use of the 2155-2180 MHz band – sandwiched as it is between two bands that will be used for base station transmissions – represents the best

opportunity available to the Commission to meet the apparent demand for asymmetric AWS pairings.

B. The Commission’s Suggestion That MDS Licensees Might Be Left With “Substantially Less” Spectrum Violates the Commission’s Policy That Relocated Licensees Be Made Whole.

A key premise of WCA’s willingness to relocate (notwithstanding the strong argument available to MDS licensees against mandatory relocation under the circumstances) is that Commission will make MDS licensees whole by affording them a full 12 MHz of replacement spectrum as a *quid pro quo* for their surrender of their rights to the 2150-2162 MHz band. That should come as no surprise to the Commission – as discussed above, WCA has consistently asserted that a full 12 MHz of replacement spectrum is necessary to make whole MDS licensees at 2150-2162 MHz, and until the release of the *Third NPRM* neither the Commission nor any party to this proceeding had suggested otherwise. WCA therefore is stunned by the Commission’s statement in the *Third NPRM* that MDS licensees need not be given 12 MHz of replacement spectrum, and instead “could be accommodated using *substantially less* spectrum than that of the existing 2150-2160/62 MHz allocation.”⁶⁹ Tellingly, the Commission cites no record support for this novel proposition (unsurprising, since none exists) and offers no supporting analysis aside from a generic reference to “advances in technology, *e.g.*, changing from digital modulation and the flexibility provided by our existing relocation procedures to make incumbents whole.”⁷⁰

Certainly, the Commission’s cursory treatment of the issue falls short of what the agency is required to do, *i.e.*, “examine the relevant data and articulate a satisfactory explanation” for its

⁶⁹ *Third NPRM* at ¶ 72 (emphasis added).

⁷⁰ *Id.*

position, including a “rational connection between the facts found and the choice made.”⁷¹ In point of fact, a more searching review of the record and Commission precedent reveals that the Commission’s “substantially less” idea will *not* leave MDS licensees whole – as WCA and others have repeatedly pointed out, the Commission’s existing microwave relocation policies were not designed for MDS and thus are not an appropriate vehicle for moving them, much less taking away a substantial amount of their spectrum. Furthermore, even if the Commission were to overlook the obvious anomaly of applying its microwave relocation policies to a service for which they were not intended and for which they are not appropriate, it cannot escape the substantial legal issues (and potential court appeals) that inevitably will arise from repossessing MDS spectrum and handing it over to another service, without giving a *quid pro quo* of appropriate replacement spectrum to dispossessed MDS licensees who have spent substantial sums of money to acquire their spectrum at auction and/or in secondary markets.

1. The Commission’s Relocation of MDS Licensees Must Be Guided By Fundamental Considerations of Fairness.

The Commission’s microwave relocation policies are grounded in the notion that relocated incumbents must be treated fairly, and thus must be made whole. In this context, “whole” means that incumbents are left “no worse off than they would be if relocation were not required.”⁷² In the *Third NPRM*, however, the Commission has assumed that what is appropriate

⁷¹ *Motor Vehicle Mfrs. Assn. v. State Farm Mut. Insurance Co.*, 463 U.S. 29, 43 (1983) [“*Motor Vehicle Mfrs. Ass’n*”]; see also *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962).

⁷² *Microwave Cost-Sharing Order*, 11 FCC Rcd at 8843 (1997); see also *Third NPRM* at ¶ 58.

to make other microwave licensees whole is the same as what is necessary to leave MDS interests no worse off than if relocation had not occurred.⁷³

The Commission has made a critical error here. As WCA and others have noted time and again, MDS is fundamentally different than the services to which the Commission's microwave relocation policies previously have been applied, and thus those policies do not address considerations that are uniquely relevant to making whole MDS licensees, the system operators who lease MDS/ITFS channels, and MDS customers.⁷⁴ Ironically, the Commission itself recognized as much over a decade ago when it specifically *excluded* MDS from the microwave relocation plan it adopted for point-to-point services in its *Emerging Technologies* proceeding.⁷⁵ Indeed, in the *Third NPRM* and elsewhere the Commission has repeatedly highlighted the consumer-based, wide-area nature of the MDS service, whether multichannel video, broadband or both.⁷⁶ WCA therefore finds it baffling that the Commission would now reverse field and

⁷³ See *id.* at ¶ 71.

⁷⁴ See, e.g., WCA NPRM Comments at 49-52. Failure to give this distinction due consideration is reversible error. See, e.g., *Achernar Broadcasting Co. v. FCC*, 62 F.3d 1441, 1447 (D.C. Cir. 1995), citing *Cities of Carlisle and Neola v. FERC*, 741 F.2d 423, 433 (D.C. Cir. 1984) (agency not entitled to deference when it has “stopped shy of carefully considering the disputed facts”).

⁷⁵ See *Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies*, 7 FCC Rcd 6886, 6889 (1992) (“With regard to the spectrum currently used for MDS operations, we note that MDS is a developing service with over 24,000 applications pending. The Wireless Cable Association International, Inc. (WCA) states that currently there are 100 MDS operations that serve 500,000 subscribers. WCA expects that many more systems will initiate service as the Commission acts on the backlog of applications. We agree with WCA . . . that, given the substantial demand for MDS evidenced by the number of pending applications, it should be afforded sufficient time to develop. Also, there are no frequency allocations above 3 GHz that could readily support the requirements of MDS, *which are wide-area and point-to-multipoint in nature.*”) (footnotes omitted) (emphasis added).

⁷⁶ See, e.g., *Third NPRM* at ¶ 66 n.165 (“Historically, the 2150-2162 MHz and 2500-2690 MHz bands were predominantly used for one-way analog video transmission. Increasingly, MDS operators are using these bands for two-way digital broadband service.”); *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission’s Rules to Facilitate the Provision of Fixed and Mobile* (continued on next page)

attempt to treat MDS as if it were a point-to-point microwave service for purposes of relocation, when both the record and the Commission's own precedent confirm that MDS is no such thing.⁷⁷

The Commission's attempt to "force feed" MDS into its point-to-point microwave relocation model runs roughshod over the rights that MDS licensees purchased for substantial sums either at auction or thereafter in secondary markets. Unlike point-to-point licensees, who receive only the right to deliver a given type of service from Point A to Point B over spectrum for which they pay nothing (and whose licenses are rarely transferred in the secondary market except in conjunction with the businesses they support), MDS licensees are afforded the right to deliver a wide variety of services directly to consumers at an unlimited number of points within their Commission-designated protected service areas (either the BTA boundary for MDS BTA licensees or a 35-mile radius for pre-auction incumbent MDS licensees). The Commission has left no doubt that the right to provide wide-area service to multiple points during the license term lies at the core of the rights acquired through the MDS licensing process.⁷⁸ In a similar vein, the

Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands et al. (Notice of Proposed Rulemaking), WT Docket No. 03-66 *et al.*, FCC 03-56, at ¶¶ 24 n. 61 (rel. Apr. 2, 2003)(noting that "[t]he Commission considered alternative kinds of geographic service areas and concluded that BTAs most closely approximated the territories served by MDS operators")(citation omitted); *id.* at ¶¶ 23-28 (discussing services currently provided by MDS systems).

⁷⁷ *Cf. Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 57 ("An agency's view of what is in the public interest may change, either with or without a change in circumstances. But an agency changing its course must supply a reasoned analysis.")(citation omitted).

⁷⁸ *See, e.g., Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service; Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, 10 FCC Rcd 9589, 9610 (1995) [*"MDS Auction Order"*] ("The holder of a BTA authorization may file one or more long-form applications seeking authority to construct stations anywhere inside their BTA on usable MDS channels, provided the specific engineering design meets the Commission's interference protection standards...and complies with the prescribed signal strength limits at the BTA boundary, *i.e.*, at all points along the perimeter of the BTA."); *id.* at (continued on next page)

Commission has emphasized that the services an MDS BTA auction winner can provide were not to be limited by those being provided at the time of the auction – rather, the Commission adopted the MDS BTA licensing system to “[provide] both new and incumbent operators with maximum flexibility to improve and expand service and implement digital technologies.”⁷⁹

Against this backdrop, it becomes clear that application of the Commission’s existing microwave relocation policies as interpreted in Paragraphs 71-72 of the *Third NPRM* cannot make MDS licensees whole.⁸⁰ The *Third NPRM* seeks comment as to whether MDS licensees could be made whole with less than 12 MHz of spectrum, proposing merely to take a “snapshot” of the service an incumbent licensee is providing at the time of relocation and to limit the relocating party’s obligation to providing replacement facilities that can provide “equivalent” or “comparable” services, regardless of whether those facilities use any spectrum.⁸¹ Although the

9611 (“The MDS station facilities within the auction winner’s BTA may be expanded or modified throughout the BTA service area so long as the system continues to be in compliance with our technical rules and protects incumbent MDS and ITFS facilities. The facilities may be expanded beyond the BTA or into the protected service area of an incumbent with an agreement from the entity that controls the adjacent BTA or the incumbent protected 35-mile circular area”).

⁷⁹ *Amendment of Parts 21 and 74 of the Commission’s Rules With Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service*, 10 FCC Rcd 13821, 13836 (1995)(emphasis added) [“*MDS Auction Reconsideration Order*”]; see also *MDS Auction Order*, 10 FCC Rcd at 9606 (“[T]he record indicates that geographic licensing may be the most efficient method to these ends in a digital environment The nature of digital transmissions will allow more flexibility to tailor signal coverage to geographic boundaries using multiple transmitting facilities.”)(footnote omitted).

⁸⁰ The D.C. Circuit disfavors reflexive application of outdated policies to new circumstances. See *Bechtel v. FCC*, 10 F.3d 875, 878 (D.C. Cir. 1993) (“When a party attacks a policy on grounds that the agency already has dispatched in prior proceedings, the agency can simply refer to those proceedings if their reasoning remains applicable and adequately refutes the challenge. *But the agency must always stand ready ‘to hear new argument’ and ‘to reexamine the basic propositions’ undergirding the policy.*”)(citations omitted) (emphasis added).

⁸¹ See *Third NPRM* at ¶¶ 71-72.

Commission never says so plainly, it obviously is contemplating the possibility of reducing the MDS allocation “substantially” if it concludes that today’s service offerings can be accommodated on less than 12 MHz. Were the Commission to adopt that approach, it would effectively confine incumbent MDS licensees to their existing levels of service in perpetuity, a scenario which simply cannot be reconciled with the Commission’s grant to MDS licensees of “maximum flexibility to improve and expand service” and otherwise develop their systems to serve as many customers as possible within their service areas.⁸² Indeed, the Commission’s position flies entirely in the face of its own stated desire to promote MDS deployment beyond

⁸² In a two-sentence footnote, the Commission hangs its hat on the relocation framework for BAS, under which incumbent BAS licensees in the 1990-2110 MHz band were shifted to the 2025-2110 MHz band (thus reducing the BAS allocation by 35 MHz) to accommodate the Commission’s allocation of spectrum for MSS at 1990-2025 MHz. *See Third NPRM* at ¶ 72 n.177. Here again, the Commission makes the mistake of ignoring critical factual distinctions that render its existing relocation policies inappropriate for MDS. Most importantly, *BAS is a point-to-point microwave service in which numerous licensees have shared access to all of the channels in the band. See, e.g., Amendment of Section 2.106 of the Commission’s Rules to Allocate Spectrum At 2 GHz For Use By The Mobile-Satellite Service (First Report and Order and Further Notice of Proposed Rulemaking)*, 12 FCC Rcd 7388, 7391 (1997) [“*MSS First Report and Order*”]. Accordingly, the BAS relocation procedures merely require the provision of what the relocated incumbent needs at the time of relocation to continue providing its current service, e.g., equipment capable of providing the same television signal from mobile units to the base. *See Amendment of Section 2.106 of the Commission’s Rules to Allocate Spectrum At 2 GHz For Use By The Mobile-Satellite Service*, 15 FCC Rcd 12315, 12345 (2000) [“*MSS Second Report and Order*”]. The Commission’s reduction of the amount of spectrum available for BAS did not have a cognizable impact on BAS licensees, since they were still able to provide the same quality and quantity of point-to-point services as before – in fact, there was agreement in the record that a robust BAS service could exist with a smaller amount of spectrum. *See MSS Second Report and Order*, 15 FCC Rcd at 12319-20. By contrast, MDS BTA holders have paid for the exclusive right to use the 2150-2162 MHz band within their respective BTAs, and to reap the benefit of any technological improvements (such as digitization). Thus, a “substantial” reduction of the spectrum available to MDS at 2150-2162 MHz would have a cognizable and irreparable impact on MDS licensees in that band, since it would preclude them from fully exercising their right to “improve and expand” service to consumers, which again is a right that MDS licensees have bought and paid for.

existing service areas and into rural and other areas that currently have little or no broadband service.⁸³

It is also impossible to square the Commission's proposal with the additional rights MDS BTA holders acquired at auction and with the policies that support the auction process. The MDS BTA licensing system was chosen specifically to facilitate the migration of MDS facilities from analog to digital technology, and the right to deploy digital technology was included in the bundle of rights awarded to winning MDS BTA bidders. Yet, the *Third NPRM* suggests that the winning auction bidders now risk losing some of the spectrum they paid for, on the theory that their current offerings can "be accommodated" on "substantially less spectrum" through the use of digital technology. That proposal simply makes no sense, particularly since auctions were created to "provide[] incentives for licensees of spectrum to *develop innovative technologies*" and that the rights to deploy new technology were sold to winning MDS bidders.⁸⁴

Moreover, although the current technology used by MDS licensees is of no moment to the process of preserving the rights MDS licensees have acquired, it is worth noting that the

⁸³ See, e.g., *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, 17 FCC Rcd 2844, 2888 (2002) ("Despite the upward trend in [broadband] subscription rates for rural communities, we note that a positive correlation persists between population density and the presence of high-speed subscribers. . . . [W]e believe that it is important to closely monitor the availability of advanced services for rural Americans, especially those living outside of the rural population centers, in order to ensure that they receive timely access to advanced services."); 3G Interim Report at 22 n.25 (concluding that "in rural or otherwise underserved markets in the country, ITFS/MDS may be the *sole* provider of broadband service") (emphasis added).

⁸⁴ *FCC Report to Congress on Spectrum Auctions*, 13 FCC Rcd 9601, 9616 (1997) ["*Auction Report to Congress*"] (emphasis added). See also 47 U.S.C. § 309(j)(3) (The Commission must auction spectrum in a manner that promotes, *inter alia*, "the development and rapid deployment of new technologies, products and services for the benefit of the public" and "promote the efficient and intensive use of the electromagnetic spectrum.").

Commission's proposal is based on the faulty predicate that existing services all utilize inefficient technology and that less than 12 MHz of spectrum can accommodate all of the current applications. The suggestion that current MDS operations do not require 12 MHz of spectrum ignores the fact that large numbers of MDS licensees have deployed highly-efficient digital technologies on MDS channels 1 and 2/2A and therefore cannot be readily accommodated on substantially less spectrum.⁸⁵ Indeed, given that virtually all MDS licensees paid for their spectrum at auction or in the secondary market and are faced with competition from cable modem and DSL services, the Commission's suggestion that an MDS operator would even consider launching service with spectrally inefficient equipment flies in the face of accepted economic theory.

Finally, there is ample precedent in other multipoint services for the Commission to provide MDS incumbents a full 12 MHz of replacement spectrum in exchange for the 12 MHz they are losing at 2150-2162 MHz. For example, under the Commission's relocation framework for incumbent point-to-multipoint SMR licensees in the upper 200 channels of the 800 MHz band, the newcomer must provide the incumbent with "equivalent channel capacity" on other 800 MHz frequencies.⁸⁶ The Commission defines "channel capacity" as "the same number of channels with the same bandwidth that is currently available to the end user," (*e.g.*, if an SMR incumbent's system consists of five 50 kHz channels, the replacement system must also have five 50 kHz channels).⁸⁷ Similarly, in relocating point-to-multipoint Digital Electronic

⁸⁵ The details regarding the specific technologies utilized by various MDS licensees are contained within the applications they submitted when securing licenses for two-way services in the late 1990's and thereafter, and are a matter of public record.

⁸⁶ *See* 47 C.F.R. § 90.699(d)(2).

⁸⁷ *See id.*

Messaging Service (“DEMS”) licensees from the 18 GHz band to the 24 GHz band, the Commission not only did not suggest that relocated DEMS licensees should be given “substantially less” spectrum – it made those licensees whole by providing them with an even greater amount of spectrum in the 24 GHz band to adjust for propagation differences.⁸⁸

2. Awarding MDS Licensees “Substantially Less” Than 12 MHz of Viable Replacement Spectrum Would Undermine the Integrity of the Auction Process and Cast a Pall Over Future Auctions for Years to Come.

As alluded to in the *Third NPRM*, many MDS licensees acquired their rights to the 2150-2162 MHz band at the Commission’s 1996 nationwide auction of MDS BTA authorizations.⁸⁹ Each winning MDS BTA auction bidder acquired, among other things, (1) the right to construct new facilities on any available MDS channel 1 (2150-2156 MHz) and any available MDS channel 2A (2156-2160 MHz);⁹⁰ (2) the right to construct new facilities on any forfeited MDS channel 1, any forfeited MDS channel 2A *and in the fifty largest markets any forfeited MDS channel 2 (2156-2162 MHz)*;⁹¹ and (3) the right to deploy digital technology on MDS channels 1

⁸⁸ See *Amendment to Parts 1, 2, 87 and 101 of the Commission’s Rules to License Fixed Services at 24 GHz*, 15 FCC Rcd 16934 (2000); *Amendment of the Commission’s Rules to Relocate the Digital Electronic Message Service From the 18 GHz Band to the 24 GHz Band and to Allocate the 24 GHz Band for Fixed Service*, 13 FCC Rcd 15147, 15170 (1998). Specifically, the Commission gave DEMS licensees a four-fold increase in bandwidth to compensate for the less advantageous propagation characteristics at 24 GHz.

⁸⁹ See *Third NPRM* at ¶ 67.

⁹⁰ See *MDS Auction Order*, 10 FCC Rcd at 9591.

⁹¹ See *id.* at 9612. The Commission notes that the 2160-2162 MHz band was reallocated for emerging technologies as of January 16, 1992, and that any subsequent use of that spectrum for MDS is secondary. See *Third NPRM* at ¶ 67 n. 169. That, however, does not speak to the status of grandfathered MDS channel 2 licenses (*i.e.*, those applied for prior to January 16, 1992) that are forfeited to the BTA holder. Nothing in the Commission’s rules states that the BTA holder cannot operate new facilities on the full MDS channel 2 (*i.e.*, the entire 2156-2162 MHz band) where a grandfathered MDS channel 2 licensee forfeits its license, and the Commission’s initial

(continued on next page)

and 2/2A.⁹² Significantly, potential bidders were “repeatedly encouraged to thoroughly review all Commission orders, public notices, MDS file information and other documentation prior to making a final determination to bid on authorizations for BTAs.”⁹³ The pre-auction information available to auction participants did *not* include any suggestion that the Commission might take a “substantial” portion of the 2150-2162 MHz band away from winning bidders after they had bought and paid for it. Likewise, the Commission did not advise winning bidders that it might eventually restrict them to a fixed amount of system capacity or level of service by stripping them of any spectrum not being used with the highest efficiency at a given moment in time. Rather, as discussed *supra*, the Commission adopted the BTA licensing system to, *inter alia*, “[provide] both new and incumbent operators with maximum flexibility *to improve and expand service* and implement digital technologies.”⁹⁴

Accordingly, any substantial reduction in the amount of spectrum winning bidders acquired rights to in the 2150-2162 MHz band would be impossible to square with the Commission’s overriding concern about preserving the integrity of the auction process.⁹⁵

MDS BTA auction *Report and Order* does not suggest otherwise. *See MDS Auction Order*, 10 FCC Rcd at 9612.

⁹² *See Request for Declaratory Ruling on the Use of Digital Modulation by Multipoint Distribution Service and Instructional Television Fixed Service Stations*, 11 FCC Rcd 18839, 18845-46 (1996) (confirming that various pre-auction MDS rules permitted MDS licensees to deploy digital technology); *MDS Auction Reconsideration Order*, 10 FCC Rcd at 13836.

⁹³ *Amendment of Parts 21, 43, 74, 78 and 94 of the Commission’s Rules Governing Use of the Frequencies in the 2.1 and 2.5 GHz Bands Affecting: Private Operational-Fixed Microwave Service, Multipoint Distribution Service, Multichannel Multipoint Distribution Service, Instructional Television Fixed Service, and Cable Television Relay Service*, 11 FCC Rcd 17003, 17008 (1996) (footnote omitted).

⁹⁴ *See MDS Auction Reconsideration Order*, 10 FCC Rcd at 13836.

⁹⁵ *See, e.g., Southern Communications Systems, Inc. Request for Limited Rule Waiver to Comply with PCS Installment Payment for C Block License in the Cleveland, TN BTA*, 15 FCC Rcd (continued on next page)

Indeed, when reviewing the Commission's oversight of that process, the D.C. Circuit "start[s] from the intuitive premise that an agency cannot, in fairness, radically change the terms of an auction after the fact,"⁹⁶ and has confirmed that a "bidder in a government auction has a 'right to a legally valid procurement process'; a party allegedly deprived of this right asserts a cognizable injury."⁹⁷ Certainly, had successful bidders at the MDS BTA auction known that the Commission might ultimately reclaim a substantial portion of the 2150-2162 MHz band and put those frequencies up for reauction, they would have adjusted their bids and subsequent investments in MDS deployment to account for the risk that the Commission might eventually reclaim and resell the spectrum.⁹⁸

25103, 25108 (2000) ("[T]he Commission operates under a statutory mandate that provides for the assignment of spectrum licenses through competitive bidding. Implicit in this statutory directive is the Commission's obligation to establish rules and regulations that protect the integrity of the competitive bidding system.") (footnote omitted); *Cellular Telecommunications Industry Association et al.'s Request for Delay of the Auction of Licenses in the 747-762 and 777-792 MHz Bands Scheduled for September 6, 2000 (Auction No. 31)*, 15 FCC Rcd 17406, 17411 (2000) ("[W]e believe the Commission's primary goal should be to conduct an auction that is fair, efficient, puts the spectrum to the best use, and thereby best serves the public interest."); *Amendment of the Commission's Rules Regarding Installment Payment Financing for Personal Communications (PCS) Licensees*, 12 FCC Rcd 16436, 16447 (1997) (permitting bidders to retain licenses for less than they bid "would be very unfair to other bidders," and would "gravely undermine the credibility and integrity" of the auction system).

⁹⁶ *U.S. Airwaves v. FCC*, 232 F.3d 227, 235 (D.C. Cir. 2000).

⁹⁷ *Id.* at 232, quoting *DIRECTV, Inc. v. FCC*, 110 F.3d 816, 829 (D.C. Cir. 1997). It is also clear that post-auction decisions that defeat the auction process are actionable, even where the auction itself was conducted properly – as the D.C. Circuit has noted, "[t]here is no basis for suggesting...that *ex post* changes can never affect the validity of a government auction." *Id.* at 232.

⁹⁸ The Commission has already recognized as much – in fact, it is for this very reason that the Commission revised its auction procedures for the Lower 700 MHz Band (Auction No. 44) in the wake of the Auction Reform Act of 2002. See *Auction No. 44 Revised Schedule, License Inventory, and Procedures, Public Notice, DA 02-1491; Petition for Reconsideration by Spectrum Holdings I, LP*, 17 FCC Rcd 14498 (2002) [*"Auction No. 44 Supplemental Order"*]. Among other things, that legislation effectively required the Commission to remove from the Auction No. 44 inventory 30 MHz of the 48 MHz of Lower 700 MHz spectrum originally
(continued on next page)

Furthermore, any attempt by the Commission to leave winning MDS BTA auction bidders with substantially less spectrum in the 2150-2162 MHz band would have a chilling effect on spectrum auctions for years to come. As previously noted by WCA but completely ignored in the *Third NPRM*, the Commission's auction process will not recover from any precedent that permits the Commission to repossess and reauction spectrum to accommodate some other wireless service without full and fair compensation. That is, those who have already won auctioned licenses, and those who are contemplating participation in future auctions, will undoubtedly take note of the Commission's actions and reassess their willingness to invest the substantial sums of money now required to obtain and develop wireless licenses through the competitive bidding process.⁹⁹ As a result, the very entities that the Commission hopes will

scheduled for auction. See Auction Reform Act of 2002, Pub. L. No. 107-195, 116 Stat. 715, sec. 3 (adding paras. 15(B) and (C)(i) to 47 U.S.C. § 309(j) and effectively removing the Lower 700 MHz A, B and E block licenses from Auction No. 44, which comprised 30 of the 48 MHz of spectrum originally scheduled for auction). In response, the Wireless Telecommunications Bureau permitted qualified Auction No. 44 bidders to either (1) withdraw from the auction and receive a full refund of their upfront payments or (2) remain in the auction and select additional licenses from the revised Auction No. 44 inventory and supplement their upfront payments accordingly. See Auction No. 44 Revised Schedule, License Inventory, and Procedures, *Public Notice*, DA 02-1491, at 4-8 (rel. June 26, 2002). The Bureau did so because "qualified bidders could not have anticipated the Auction Reform Act's changes to Auction No. 44 when they originally submitted license selections of upfront payments." *Auction No. 44 Supplemental Order*, 17 FCC Rcd at 14503-04 (footnote omitted). One would have to assume that the Commission would have afforded MDS BTA auction participants similar relief had it advised them that it might reclaim a "substantial" portion of the 2150-2162 MHz band after they had bought and paid for it.

⁹⁹ Cf. *Auction Report to Congress*, 13 FCC Rcd at 9637 (attributing low bids for WCS licenses to uncertainty surrounding the WCS auction). Similar concerns have been expressed even by those who have sought to displace MDS incumbents from their spectrum in this proceeding. See, e.g., Reply Comments of Verizon Wireless, ET Docket No. 02-135, at 5 (filed July 23, 2002) ("[T]he level of uncertainty surrounding the rights that will be accorded a winning bidder can change the nature of the auction. Too much uncertainty regarding the allocation can change the auction process from the Congressionally-mandated purpose of the rapid introduction of new technologies, products and services 'without administrative delays,' to nothing more than a high-risk speculation that in fact undermines the certainty that any spectrum market needs to function (continued on next page)

participate in spectrum auctions, *i.e.*, those that are “most likely to offer new, better, and lower cost services,”¹⁰⁰ will be discouraged from doing so, a result which in no way serves the public interest.¹⁰¹

Even if the Commission were to ignore the fundamental unfairness of its proposal to winning MDS BTA auction bidders and the proposal’s ramifications for future spectrum auctions (and it should not ignore either), it cannot escape the substantial legal issues raised by repossessing spectrum auctioned for one service and handing it over to another, without giving a *quid pro quo* amount of replacement spectrum to the dispossessed auction winners. The governing auction statute (47 C.F.R. § 309(j)) gives the Commission no express authority to do this, nor does it otherwise suggest that the Commission’s discretion includes the right to subvert the auction process by taking auctioned spectrum away from winning bidders after it has been bought and paid for. Further, the Commission has consistently recognized that the close of a spectrum auction, like any auction, creates a binding contractual obligation between the Commission and the winning bidder.¹⁰² In turn, “[w]hen the United States enters into contractual

properly.”) (footnote omitted); Comments of Cingular Wireless LLC, ET Docket No. 02-135, at 3 (filed July 8, 2002) (“A market-based system such as auctions, . . . , will work properly only if there is certainty and clarity *in advance* concerning the rights and responsibilities of licensees. The FCC must also stand by such principles *after* the auction to assure an orderly market.”) (emphasis in original).

¹⁰⁰ *Review of the Pioneer’s Preference Rules*, 9 FCC Rcd 4055, 4059 (1994).

¹⁰¹ For that reason alone, this case is distinguishable from *U.S. Airwaves v. FCC*, cited at note 96 above, in which the D.C. Circuit upheld the Commission’s post-auction amendment of its rules to create a new “menu” of financing options for winning bidders in the agency’s auction of C-block PCS licenses. In that case, the Commission did *not* take spectrum away from bidders who had legitimately bought and paid for their licenses – it simply created new financing options for entrepreneurs and small businesses that may have overpaid for their licenses.

¹⁰² *See BDPCS, Inc.*, 15 FCC Rcd 17590, 17599-600 (2000) (“The announcement of the winning bidder in an auction conducted by the Commission [is] like the acceptance of high bids in auctions in other settings.”); *Amendment of the Commission’s Rules Regarding Installment* (continued on next page)

relations, its rights and duties are governed generally by the law applicable to contracts between private parties.”¹⁰³ By extension, then, the Commission will have breached its “contract” with winning MDS auction bidders by unilaterally changing the terms of the auction after the fact, *i.e.*, by reclaiming a “substantial” portion of the 2150-2162 MHz band after it has been bought and paid for, without providing winning MDS auction bidders the same amount of replacement spectrum in return.

It must also be remembered that some MDS licensees in the 2150-2162 MHz band acquired their rights to that spectrum through secondary markets (*e.g.*, by purchasing MDS BTA authorizations from winning auction bidders and/or by purchasing or leasing MDS channels 1 and/or 2/2A from incumbent licensees), and thus the Commission must consider the impact of its proposal on its ability to create a viable secondary markets policy for wireless services. In a separate rulemaking, the Commission has already tentatively concluded that secondary markets “will facilitate full utilization of spectrum by the highest value end users.”¹⁰⁴ In a similar vein, the Commission’s Spectrum Policy Task Force has endorsed secondary markets as a means of promoting access to spectrum and introducing new technologies to the marketplace.¹⁰⁵ The Task Force has, however, emphasized that secondary markets cannot function efficiently unless

Payment Financing for Personal Communications Services (PCS) Licenses, 14 FCC Rcd 6571, 6581 n.66 (1999) (auction creates a “contractual obligation” between the Commission “and the winning bidder as of the close of the auction”); *NextWave Personal Communications Inc.*, 200 F.3d 43, 60 (2d Cir. 1999); 7 AM. JUR. 2d, Auctions and Auctioneering § 34 (1997) (an auction is a mechanism for an exchange of an offer and acceptance - the close of the auction constitutes the acceptance of the bid, or offer, and creates “an executory contract of sale”).

¹⁰³ *Mobile Oil Exploration v. United States*, 530 U.S. 604, 607 (2000); *see also Franconia Associates. v. United States*, 122 S. Ct. 1993, 2001 (2002);.

¹⁰⁴ *Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium*, 14 FCC Rcd 19868, 19872 (1999).

¹⁰⁵ *See* Spectrum Policy Task Force Report at 6, 57.

spectrum rights are clear and well-defined.¹⁰⁶ That condition, obviously, cannot be satisfied if potential buyers and lessees of spectrum are exposed to an ongoing threat that the Commission may at any time reclaim the spectrum they are buying or leasing without giving them an identical amount of replacement spectrum in return.

3. The Commission's Proposed Reclamation of a "Substantial" Portion of the 2150-2162 MHz Band Would Defeat the Legitimate Investment-Backed Expectations of Incumbent MDS Licensees.

It is well established that Commission licenses convey legally protected interests that are akin to property rights. The D.C. Circuit, for example, recognized long ago that "[i]t is... apparent that the granting of a license by the Commission creates a highly valuable property right, which, while limited in character, nevertheless provides the basis upon which large investments of capital are made and large commercial enterprises are conducted."¹⁰⁷ This is especially true of MDS – by now the Commission is well aware that MDS stakeholders have spent substantial sums of money to acquire rights to MDS spectrum (including the 2150-2162

¹⁰⁶ *See id.* at 57 ("If the rights afforded to licensees are sufficiently well-defined and flexible, and the secondary market mechanism is fast and efficient with low transaction costs, licensees will have ample incentive to negotiate with potential secondary users for . . . access."); *id.* at 23 ("[A] level of certainty regarding one's ability to continue to use spectrum, at least for some foreseeable period, is an essential prerequisite to investment, particularly in services requiring significant infrastructure and lead time.").

¹⁰⁷ *Yankee Network, Inc. v. FCC*, 107 F.2d 212, 217 (D.C. Cir. 1939). *See also In re Atlantic Business and Community Development Corp.*, 994 F.2d 1069, 1073-74 (3d Cir. 1993) (discussing U.S. Supreme Court's decision in *FCC v. Sanders Brothers Radio Station*: "We do not think *Sanders Brothers* holds that an FCC license has none of the attributes of property. The Communications Act itself seems to imply the existence of a limited property right in an FCC license once it is granted. Section 301 . . . implies the creation of rights akin to those created by a property interest limited only by the 'terms, conditions and periods of the license.'").

MHz band) and have continued to make substantial investments in reliance on those rights.¹⁰⁸ Accordingly, in addition to the auction-related issues discussed above, the Commission must consider the legal and public policy consequences of confiscating a substantial portion of the 2150-2162 MHz band from MDS incumbents who have spent enormous resources under the legitimate assumption that the rights they had purchased would not be taken from them.

At a minimum, any attempt by the Commission to take a substantial portion of the 2150-2162 MHz band without providing replacement spectrum in return would be susceptible to challenge under the Fifth Amendment of the Constitution of the United States, which limits the federal government's power to take property without just compensation.¹⁰⁹ In *Connolly v. Pension Benefit Guarantee Corp.*,¹¹⁰ the United States Supreme Court held that there is no set formula for identifying a "taking of property" prohibited by the Fifth Amendment – instead, the Court relies upon an *ad hoc* analysis of: "(1) 'the economic impact of the regulation on the claimant'; (2) 'the extent to which the regulation has interfered with distinct investment-backed expectations'; and (3) 'the character of the governmental action.'"¹¹¹ Here, incumbent MDS licensees paid substantial sums for the rights to their spectrum, and have invested even more towards deploying that spectrum for broadband and other services. The integrity of those

¹⁰⁸ See, e.g., Comments of Sprint Corporation, ET Docket No. 00-258, at i (filed Feb. 22, 2001) ("Sprint Corporation. . . over the last few years has invested more than \$2 billion dollars to bring broadband fixed wireless services to U.S. consumers. Sprint made this investment in reliance on the Commission's multi-year effort to encourage two-way, digital use of spectrum frequencies at 2150-2162 MHz . . . and 2500-2690 MHz.").

¹⁰⁹ See generally *Railway Labor Executives Ass'n v. United States*, 987 F.2d 806, 815-16 (D.C. Cir. 1993) ["*Railway Labor*"].

¹¹⁰ 475 U.S. 211 (1986)

¹¹¹ *Id.* at 224-25 (citation omitted); see also *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1005-06 (1984).

investments is put at risk where the Commission repossesses and reauctions that spectrum at will without providing dispossessed licensees an identical amount of replacement spectrum. Hence, under *Connolly*, the Commission's proposed repossession of a substantial portion of the 2150-2162 MHz band arguably would be tantamount to an unlawful taking of property under the Fifth Amendment, and, if not reversed, leaves the Commission vulnerable to a potentially endless parade of Tucker Act lawsuits in the Federal Court of Claims.¹¹²

Even in the absence of relief predicated on Fifth Amendment principles, courts have been willing to consider claims of detrimental reliance by Commission licensees. For example, in *Mobile Comm. Corp. of Am. v. FCC*,¹¹³ the D.C. Circuit found that the Commission, in withdrawing its previous promise of a free pioneer's preference license, had failed to give adequate consideration to the appellant's reliance concerns.¹¹⁴ Elsewhere, the D.C. Circuit has recognized that even applicants may have enforceable reliance interests.¹¹⁵ Again, in the present case MDS licensees have made enormous investments in reliance on the integrity of the Commission's licensing process – any repossession of a substantial portion of the 2150-2162 MHz band will lay that reliance to waste, and will require dispossessed MDS stakeholders to seek judicial relief.

¹¹² Under the Tucker Act, 28 U.S.C. § 1491(a), the United States Court of Federal Claims has original and exclusive jurisdiction over suits seeking compensation from the United States under the Constitution. See *Railway Labor*, 987 F.2d at 815-16.

¹¹³ 77 F.3d 1399 (D.C. Cir. 1996).

¹¹⁴ See *id.* at 1407. Cf. Spectrum Policy Task Force Report at 61 (stating that changes in federal spectrum policy “cannot, and should not, be implemented without giving serious consideration to the reliance interests of incumbent spectrum users”).

¹¹⁵ See, e.g., *McElroy Elec. Corp. v. FCC*, 86 F.3d 248, 257 (D.C. Cir. 1996); *Florida Inst. of Tech. v. FCC*, 952 F.2d 549, 554 (D.C. Cir. 1992).

C. The Commission Should Employ The Band-Clearing Policies Proposed In The MDS Industry Compromise To Govern The Relocation Of Incumbents In The 1910-1916 MHz And 1990-1996 MHz Bands.

The *Third NPRM* solicits comments on whether MDS operations could co-exist with incumbent users in suggested relocation bands and, if not, proposed relocation procedures.¹¹⁶ The simple answer is that MDS cannot co-exist with incumbent point-to-point microwave licensees in the 1910-1916 MHz band or the BAS licensees in the 1990-1996 MHz band. Although ignored in the *Third NPRM*, the MDS Industry Compromise provided a detailed discussion of the relocation of those incumbent licensees.¹¹⁷ Admittedly, WCA's proposal for the relocation of incumbent BAS licensees will have to be modified in light of the Commission's decision in the *Third Report and Order* to strip certain spectrum from MSS.¹¹⁸ However, the fundamental concepts of WCA's proposal remain intact. As discussed in detail in the MDS Industry Compromise:

- All costs incurred by MDS licensees and lessees, including any costs of clearing the replacement band, must be borne by the winners of the 1.7/2.1 GHz auction.¹¹⁹
- No MDS licensee should be required to relocate until the replacement spectrum is cleared of incumbents at the expense of the 1.7/2.1 GHz auction winner.¹²⁰
- Any MDS licensee should be free to relocate immediately, pay all of the costs associated with doing so (including band-clearing) and securing reimbursement following the 1.7/2.1 GHz auction.¹²¹

¹¹⁶ See *Third NPRM* at ¶ 73.

¹¹⁷ See MDS Industry Compromise at Appendix A.

¹¹⁸ See *Third NPRM* at ¶ 37 n. 102.

¹¹⁹ See MDS Industry Compromise at 3.

¹²⁰ See *id.* at Appendix A, at p. 2.

¹²¹ See *id.* at Appendix A, p. 2 n. 8. As WCA noted at the time, this self-help approach not only will speed the clearing of the 1910-1916/1990-1996 MHz band, but will accommodate the
(continued on next page)

possibility that in some cases MDS system operators will choose to migrate existing services from the 2150-2162 MHz band to spectrum other than the 1910-1916/1990-1996 MHz band (such as Wireless Communications Service (“WCS”) spectrum at 2.3 GHz or MDS/ITFS spectrum at 2.5 GHz) pending the clearing of the 1910-1916/1990-1996 MHz bands. There are several reasons why this option might be elected.

As previously explained, one of the primary concerns MDS system operators have with any migration from 2150-2162 MHz is the negative impact on the subscriber, who will be required in many cases to remain at home for a service call during which its current customer premises equipment will be exchanged for equipment capable of operating on the new spectrum. *See* WCA NPRM Comments at 48-53; WorldCom NPRM Comments at 11; Nucentrix NPRM Comments at 5. The loss of customer goodwill caused by this disruption is a “soft cost” that simply cannot be fully reimbursed, and must be minimized wherever possible. Operators may choose to minimize the disruption by starting to migrate customers immediately to currently available alternate spectrum whenever a routine service call is made to the home, without awaiting the clearing of the 1910-1916/1990-1996 MHz band. While some operators are spectrum-constrained and cannot avail themselves of this option, others may have spectrum that had been set aside initially for future use as their customer base expands. This expansion spectrum could be put to use more rapidly as part of a migration plan, and the 1910-1916/1990-1996 MHz band would then become that operator’s expansion spectrum once it is cleared.

Another scenario may occur where the entire 2150-2162 MHz band is currently used for upstream communications. In such a situation, the system operator may find that due to the loss of six megahertz of upstream capacity, the new 1910-1916 MHz upstream band alone would not satisfy its immediate capacity requirements, and therefore decide to supplement the 1910-1916 MHz upstream band with channels in other bands on either a TDD or FDD basis. For example, a system that today uses all of the 2150-2162 MHz band for upstream communications may need to utilize MDS channels in the 2.5 GHz band to replace the upstream capacity lost as a result of the relocation of MDS channels 1 and 2/2A. In any such cases, the 1.7/2.1 GHz auction winner should be required to bear the expenses incurred as a result of the move to the chosen relocation band, but not any of the costs incurred by the system operator in purchasing or leasing that new band (as such costs are essentially covered by the provision of spectrum at 1.9 GHz). In other words, returning to the prior example, the 1.7/2.1 GHz auction winner should be responsible for the costs of clearing the 1910-1916/1990-1996 MHz band and the costs of migrating subscribers to the MDS channels at 2.5 GHz, but not the cost of buying or leasing those MDS channels. Similarly, in some cases spectrum-constrained system operators may find that although the existing services offered over MDS channels 1 and 2/2A cannot be offered at 1910-1916/1990-1996 MHz because of the operating restrictions required to protect broadband PCS, they can provide those services in the 2.5 GHz band by introducing newer technologies. In such cases, the 1.7/2.1 GHz auction winner should be required to bear the expenses incurred in introducing those technologies, but again, not any of the costs incurred by the system operator in purchasing or leasing the spectrum. In either of these cases, the system operator can migrate consumers immediately (regardless of whether the 1910-1916/1990-1996 MHz band can be cleared quickly), and then commence using the 1910-1916/1990-1996 MHz band later.

As is demonstrated in the MDS Industry Compromise, this approach is not only consistent with precedent, but will best serve the public interest by expediting the relocation of MDS.

D. The Commission Can Resolve The Interference That Nextel Causes To Public Safety Users At 800 MHz Without Granting Nextel A Nationwide License For The 1910-1915/1990-1995 MHz Band Pair.

Finally, the record in WT Docket No. 02-55 confirms that the Commission need not and should not cast the MDS Industry Compromise aside to accommodate Nextel's demand for a nationwide license in the 1910-1915/1990-1995 MHz band. Nextel continues to assert that the Commission must award it the 1910-1915/1990-1995 MHz band as a putative *quid pro quo* for Nextel's commitment to resolve the interference it is causing to public safety operations in the 800 MHz band.¹²² As already demonstrated at length by WCA and others, the Commission can resolve that problem without awarding the 1910-1915/1990-1995 MHz band to Nextel,¹²³ and ironically Nextel's own filings appear to admit as much.¹²⁴ Conversely, the public interest

¹²² See, e.g., Supplemental Comments of the Consensus Parties, Nextel Communications, Inc. *et al.*, WT Docket No. 02-55 (filed Dec. 24, 2002) ["Nextel Supplemental Comments"]. Specifically, Nextel contends that it must be awarded a nationwide license at 1910-1915/1990-1995 MHz as compensation for its proposed surrender of a hodgepodge of non-nationwide and in some cases highly encumbered 700/800/900 MHz spectrum. Nextel's commitment to resolve the interference it is causing to public safety operations is expressly conditioned on the Commission's approval of this purported "swap." See, e.g., *id.* at 4 n.6.

¹²³ See, e.g., Comments of Wireless Communications Ass'n Int'l, WT Docket No. 02-55, at 3-9 (filed Feb. 10, 2003); Comments of Cellular Telecommunications & Internet Ass'n, WT Docket No. 02-55, at 13 (filed Feb. 10, 2003); Comments of Verizon Wireless, WT Docket No. 02-55, at 15 (filed Feb. 10, 2002); Comments of Cinergy Corporation, WT Docket No. 02-55, at 7 (filed Feb. 10, 2003); Comments of Boeing Corporation, WT Docket No. 02-55, at 17 (filed Feb. 10, 2003); Comments of Access Spectrum LLC, WT Docket No. 02-55, at 18-19 (filed Feb. 10, 2003); Reply Comments of ALLTEL Communications, Inc. *et al.*, WT Docket No. 02-55, at 13-14 (filed Feb. 25, 2003).

¹²⁴ In particular, Nextel has conceded that the "underlying cause" of the public safety interference problem is the "mixed use" structure of the 800 MHz band, not a shortage of spectrum in the 700, 800 and 900 MHz bands. See Nextel Supplemental Comments at 8-9 (continued on next page)

benefits of the MDS Industry Compromise have been and continue to be well documented – as explained above, it remains the *only* workable solution to clearing the 2150-2162 MHz band and allowing an auction of the full 2110-2155 MHz band for AWS. Acceptance of Nextel’s disingenuous proposal, which at best is just one of many ways the Commission can address the public safety interference problem, will preclude that solution to no one’s benefit except, of course, Nextel.¹²⁵

III. CONCLUSION.

Once again, it must be stressed that the MDS industry has done everything possible to cooperate with the Commission in this proceeding, notwithstanding the substantial economic and logistical burdens relocation will impose on licensees, system operators and consumers. For their trouble, MDS licensees have been thrown out of their spectrum with the Oz-like mandate that they “come back tomorrow” for further proceedings, thus prolonging regulatory uncertainty

(“[T]he Consensus Plan recognizes that the underlying cause of CMRS - public safety interference is the Land Mobile Radio Band’s mixed spectrum allocation for different communications services with conflicting design principles and communications goals. . . . *The fundamental remedial action necessary to correct CMRS - public safety interference at 800 MHz is to separate high-site and low-site system architectures into two distinct spectrum blocks, with the low-site block adjacent to the architecturally compatible Cellular allocation.*”) (emphasis added).

¹²⁵ The Commission has before it a number of different proposals (including the one the Commission itself advanced in the *Notice of Proposed Rulemaking* for WT Docket No. 02-55) which provide for addressing the public safety interference problem without requiring the Commission to award spectrum in the 1.9 GHz band to Nextel. *See, e.g., Improving Public Safety Communications in the 800 MHz Band*, 17 FCC Rcd 4873, 4884-85 (2002) (discussing rebanding plan proposed by the National Association of Manufacturers); *id.* at 4887-88 (discussing Commission’s rebanding proposal); Comments of the District of Columbia Office of Chief Technology, WT Docket No. 02-55, at 6-11 (filed May 6, 2002); Comments of the Maryland Department of Budget and Management, Office of Information Technology, WT Docket No. 02-55, at 5-13 (filed May 6, 2002); Comments of TRW/Ohio MARCS Program Office, WT Docket No. 02-55, at 5-8 (filed May 6, 2002); Comments of M/A Com, Inc., WT Docket No. 02-55, at 10-16 (filed May 6, 2002); Reply Comments of Motorola, Inc., WT Docket No. 02-55, at 6-19 (filed Aug. 7, 2002).

for the indefinite future. Yet, as demonstrated above, the answers to the questions asked twice before by the Commission in this proceeding have not changed. The 1910-1916/1990-1996 MHz band remains the only viable spectrum for relocation of MDS licensees displaced by the *Second Report and Order*, and the Commission's microwave relocation policies must be substantially revised to reflect material differences between the nature of MDS and the other services to which those relocation policies have been applied.

Respectfully submitted,

THE WIRELESS COMMUNICATIONS
ASSOCIATION INTERNATIONAL, INC.

By: /s/ Andrew Kreig
Andrew Kreig
President

1140 Connecticut Avenue, N.W.
Suite 810
Washington, D.C. 20036-4001
(202) 452-7823

April 14, 2003